

THE LARYNGOSCOPE.

VOL. XXIII. ST. LOUIS, DECEMBER, 1913. No.

ORIGINAL COMMUNICATIONS.

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THE DEVELOPMENT AND EXTENSION OF THE LIMITS OF LARYNGOLOGY.*

DR. GEORGE A. LELAND, BOSTON.

To this, the thirty-fifth annual meeting of the oldest national laryngological society in the world, it is my bounden duty and great privilege to extend a most cordial welcome and I do it with due appreciation of the great honor which you have conferred upon me by adding my humble name to that noble list of my predecessors in this high office, the Nestors of our specialty in America. For in common with them, I consider it the highest honor which can come to any man in our branch of medicine: and I may add that it is one which I had no right to expect, having apparently deflected from strict laryngology to the study and practice of what should be considered its most important branch.

The more I have read of the history of our association and become imbued with its spirit, the more honor and respect and admiration I have for those twenty-one gentlemen who met in Buffalo, June 3, 1878, and projected our cherished association. And of these founders we rejoice that after thirty-five years we still have on our list of active fellows, four, and on the retired list, one. And there are three others still living, one of whom is yet in active practice in a wider field: so that of those who founded the world's first national association for the study of laryngology, there are still eight living. And as is so often the case, we can well say they

*Presidential address delivered to the thirty-fifth annual meeting of the American Laryngological Association. Washington, D. C., May 5, 1913.

laid the foundation for a structure greater than they knew, or could, perhaps, even imagine. And we must admire their intrepidity and determination, for in those early days the use of our mirrors was looked upon with doubt, disbelief, and ridicule. Dr. Elsberg in the first annual address expressed this, as quoted by Delavan in his masterly address in 1894, when he said, "The road has been a rugged one, and few of you can realize to-day the uphill work, the obstacles, and obloquy encountered." Even in the writer's memory, back in 1883 or 1884, how oracular was the advice of his medical and surgical friends that exclusive throat practice would never be successful, and more than one general practitioner then turned up his nose and with a contemptuous smirk said "playthings" when the laryngoscope was laid out for examination of a tuberculous larynx. And yet one of them had to acknowledge its efficacy when euthanasia was brought about by swabbing out such a larynx.

The field has widened enormously during the last thirty-five years. One of our early presidents deprecated the addition of the nose to our subject of laryngology, but the discovery of cocaine made it inevitable that it and its adnexa should be added and studied and mastered. And since the ear is also an accessory cavity, nine-tenths of whose diseases originate in the mucous membrane of the nose and naso-pharynx, the preventive measures against, as well as treatment of, aural disease are to be carried out in the regions falling under the jurisdiction of the American Laryngological Association. This was brought out in 1883 in a paper wonderfully erudite for that time, written by Dr. Beverley Robinson, one of our former members, and published in the Transactions of that year.

Preventive medicine is the great subject prominently brought to our attention at this meeting because of the great fame of the President of this Triennial Congress in this regard. His phenomenal work in Cuba, and in the Canal Zone where he has made the pestilential tropics inhabitable, is one of the wonders of the world: and the name of Gorgas will ever shine as one of the bright and particular stars in the galaxy of American medicine. This is attested by the fact that whereas during the French occupation, daily a train-load of dead was taken to that most populous of graveyards at Ancon, so numerous were the victims of tropical zymotic disease that records could not be, or at least, were not kept. Now the death rate is reduced to that of the most healthful parts of the earth. While Col. Gorgas has saved his tens of thousands, it falls to each and every one of us to be enlisted in the cause of preventive

medicine. And this is the spirit of our association and of our profession, my brethren, to prevent as well as to cure, to destroy our business and deplete our pockets for the good of suffering humanity. So now the modern Samaritan on the Jericho pike not only heals the sufferer by the wayside, but seeks out and destroys the cause of his malady, whether intrinsic or extrinsic, so that there will be fewer sufferers from the same cause for the exercise of the benevolence, skill, or greed of other Samaritans.

Our founders builded wiser than they knew when they chose the throat as the field of their specialty, for here, as shown by modern bacteriology and clinical observation, is the port of entry of many of the diseases, nay, we might almost say most of the diseases to which poor human flesh is heir. The New York daily which said "The nose is the source of all our woes" was not far from right, but would have been nearer right if it had said the throat and nose. For it is well established that here may enter through the lymphatics of the fauces and nose micro-organisms which cause tuberculosis, nephritis, endocarditis, sepsis, cerebro-spinal meningitis, acne, erythema nodosum, erysipelas, etc., and by extension up the Eustachian tube, aural disease of all sorts leading to deafness, pyemia, meningitis, intra-cranial abscess, and so on and on. And it is in our province of preventive medicine to obviate all this, to put the upper air passages into the best possible shape, and to teach our patients to use them: I repeat, to teach the proper and continuous use of them; for evidently this is a most important part of our work; since this gives nature the chance to use the wonderful measures she has provided for the protection of our organism.

It is not necessary to prove this by going into the physiology of the nose and of the faucial lymphatics before this audience but it is desired to emphasize the contention that the laryngo-rhinologist is the best and most rationally obvious aurist because in his hands lies the prevention of those pathological conditions which bring about so much pain, distress, inefficiency, misery, and danger, and because in his region is the best point of attack for either acute or early chronic middle-ear disease. In a speech at the banquet of the Ninth International Otological Congress in Boston last August, one of the first otologists in America, and hence, of the world, advocated the study of pure otology untrammelled by other branches of the upper air passages. But it is evident to the members of this American Laryngological Association without doubt that if the nose and naso-pharynx could be put into proper shape and continuously used, the occupation of the aurist would be gone, except for the effects of traumatism, and perhaps for the infections, though it is

evident that these would be largely reduced except again for invasions of the internal ear from such affections as mumps, pregnancy and some forms of meningitis.

It has been said above that in our region lies the best point of attack for acute otitis media, and it may not be out of place to say that many cases of acute inflammation of the middle ear may not only be prevented but also aborted, even when the drumhead is red or even bulging, by relieving the congestion and engorgement of the naso-pharyngeal lymphatics, which means the adenoid operation especially including the fossae of Rosenmueller. This has been the writer's practice for twenty-five years in private when possible, and in hospital practice when opportunity offered. Many inflamed and acutely distended drumheads have been saved perforation by the needle or otherwise with all the annoyance of discharging ears consequent thereon, because drainage was established from within.

And so also in the region of our activities are to be found the ports of entry for infections of the cervical glands. And *we* know how universally we find that these unsightly tumors are preceded by diseased adenoids and tonsils when acute, and how equally frequently chronic indurations here are accompanied by chronic disease of these lymphatic structures. In fact, in no wise can here the diagnosis be complete unless the condition of the tonsils and adenoids be thoroughly ascertained. And yet how often is it the case that the general surgeon performs his extensive dissection for the removal of these glands and leaves the morbid source untouched and probably unknown.

So that here again is our work preventive if it results in the removal of intra-cervical disease before the extra-cervical indurations have broken down and become fluctuating. And by the same token, the most effective treatment of early cervical adenitis is the thorough ablation of our old friends, infected tonsils and adenoids. Moreover, it is by no means necessary to consider these glands tubercular even though the pathologist may find a few bacilli in their substance. Dr. G. Sims Woodhead, in his illuminating article on the "Channels of infection,"¹ showed conclusively that these glands can take care of and destroy infectious matter passing down the lymphatic chain, including even tubercle bacilli. Thus does preventive medicine come into our province where we seek to make effective Nature's abundant protective measures.

And so from our restricted region the field is ever broadening. Headaches, neuralgia, that terrible tic douloureux which inflicts so

much misery and leads even to suicide—these often find their origin in the peripheral distribution of the fifth nerve in the nose and its accessory cavities, when pressure from retention of pus or from contact can very often be found if sought, the relief of which would obviate the necessity of operations on the nerve, and especially the removal of the Gasserian ganglion, which is so often not successful permanently or even for a short time.

Moreover from the original demarcation of laryngology we have not only gone upward, but the introduction of Kierstein's method of direct laryngoscopy has taught us to go downward, so that not only the larynx, but the trachea and bronchi are open to our vision. And furthermore, behind the larynx the esophagus and even the stomach can now be penetrated by illuminating tubes and ingenious instruments, the products of the consummate skill and inventive genius of Killian, one of our Corresponding Fellows, and of Jackson and Mosher, and other active fellows of our great association.

And now, as a final compliment to us, the studies of the pituitary body, i. e., the hypophysis cerebri, have shown the desirability of its removal and the most obvious way and the most usual, is through the nose, the operation of resection of the septum having shown the best way to enter the sphenoid and to reach the gland by removal of its roof.

So that it can now be said without fear of contradiction that the confines of laryngology as laid out by our noble founders thirty-five years ago have been extended till they embrace most of the upper half of the body—from the umbilicus to the crown of the head. Truly in the language of that doughty warrior, Commodore Perry, "We have met the enemy and they are ours." And it may be added that the aggressive spirit of progress of the American Laryngological Association will advance in the future as in the past. When other obstacles to advancement appear, we shall quote again from one of our greatest generals, who, in 1863 was called "Unconditional Surrender Grant:" "I propose to move immediately upon your works."

And yet in the accurate knowledge and prophetic vision of our first president much of this field was outlined in his definition of the boundaries of our specialty. To quote from his address, p. 36,² "The throat specialist of to-day is called upon to treat all these diseases, and more, viz., affections of the larynx and trachea; of the root of the tongue, vallecule and hyoid bone; of the tonsils, palate and uvula, of the pharynx, pyriform sinuses and esophagus; of the pharyngo-nasal space, nasal passages and frontal sinus; of the

thyroid body, parotid and sublingual glands; and of the areolar tissue, and other structures that make up the anterior portion of the neck.

"Besides, as the mucous membrane of the throat is continuous with that of the whole alimentary tract on the one hand, and that of the bronchi and their ramifications to the air cells in the lungs on the other, and through the pharynx the nasal fossae extends to the sphenoidal, ethmoidal and maxillary sinuses, through the lacrimal duct to the conjunctiva, and through the Eustachian tube to the mastoid cells and tympanum—certain diseases of these regions must, sometimes, be considered by the laryngologist in addition." And then he makes this most pertinent and forceful remark, "I need not here dwell upon the fact that the connection between throat diseases and other diseases of the body is so intimate, that no one is competent to be a throat specialist without a previous thorough medical education and considerable general clinical experience." It is to be feared that this is not always heeded and acted upon.

During the past year no startling discovery has come to notice in our specialty, but in the process of sifting out the chaff and conserving the grain, notable advance may be recorded towards perfection in endoscopy of, and treatment in the bronchi, esophagus, nose and naso-pharynx. Vaccines and serums and radium are being tested and exploited, so that in the near future we may expect them to take their proper places in our therapy. The great mountains of tuberculosis and of malignant disease yet remain unconquered, though the former in early stages seems to be more or less amenable to climatic and dietetic treatment. The early surgical removal of localized malignant disease seems, however, to be making some progress.

Much has been said in the thirty-four preceding presidential addresses on the subject of education of the undergraduate, how much of laryngology could be crowded into his short and over-crowded curriculum; of the post-graduate, how much could be shown and taught him in the few weeks or months he could devote to the subject, i. e., how much of a near-specialist we could make of him.

But there is a large class still which has not been mentioned—the general practitioner. And it is, it seems to me, (aside from the pleasure of renewing delightful acquaintance) the one great object of these annual meetings to discuss questions and measures of utility and importance, and to put out our conclusions in an attractive, concise, and authoritative form so as to demand the attention of every doctor. And to this end our papers should be

widely spread through journals of general medicine, and not embalmed in our volumes of Transactions only, valuable though they may be and are. In saying this I am not unmindful of the great circulation of the *Journal of the American Medical Association* and of the two great New York journals, but I suggest still wider dissemination, so that dangerous conditions may not become fatal because unrecognized with a laryngologist or bronchoscopist near at hand but not consulted.

"Of making many books there is no end, and much study is a weariness of the flesh," was said long before modern medical writings were even conceived of. And yet it is our duty and privilege to add to them, to publish the results of our pioneer work for the guidance of those whose field is less restricted. And for the busy practitioner the short, concise article dealing with the commoner, yet sometimes puzzling and obstinate maladies to be found in the upper air passages, which he may almost daily meet, is more acceptable than the long, learned, scientific and often largely historical monograph on those diseases which even the specialist rarely sees. To be a guide, a teacher, an aid, it is well to write clearly to the point. To show our learning, our industry, the labor of our research and the extent of our experience, we can afford to be comprehensive, discursive, prolix and ponderously scientific, but then our readers will be largely, if not exclusively, specialists like ourselves.

At the beginning of the nineteenth century, all of medical knowledge, as well as the whole range of human knowledge of that time was compassed by the brain of one man, Dr. Thomas Young, of St. George's Hospital, and just a century ago this year (1813) was published his first book, "Introduction to medical literature, including a system of practical nosology," a work of great labor and of great assistance to students and investigators. But at that time the whole of medical literature would not equal that of any one of our modern specialties, the mastery of which, together with a necessary working-knowledge of general medicine or surgery, taxes severely enough the minds of even our greatest intellectual prodigies.

It is my sad duty to record that three of our fellows have joined the "innumerable caravan" during the year.

Dr. C. E. Bean, of St. Paul, was admitted in 1880. He seems to have contributed a few articles in the early years of his membership, and was a genial fellow, though latterly little known.

Dr. James E. Newcomb, our last president, died two and a half months after he relinquished the office. At the meeting in Phila-

delphia, 1911, it was, alas! too obvious that he was in failing health, and we all heartily approved of the action of the nominating committee in conferring upon him what he considered "the highest honor in the power of American laryngologists to bestow," and we hoped it was not too late. He served us faithfully and assiduously for eleven years in the office of secretary, during which time our membership had doubled. Learned, skillful, philanthropic, influential, a hard worker and genial good fellow, his memory will ever be enshrined in the hearts of those who had the good fortune to know him and especially in your hearts, my brethren of the American Laryngological Association.

And last Tuesday, on April 29, passed on our former president, Dr. C. H. Knight. He came into the association in 1885, served as secretary 1889 to 1895, and was president in 1896. He was a hard worker, a learned professor, contributed much to our Transactions, and was, withal, a splendid, kindly, genial gentleman. It was always touching to me when I heard his New York confreres refer to him as "Charlie Knight." It showed their familiar, affectionate regard.

Newcomb and Knight—two great souls have passed on to their well deserved and abundant reward, and have left a desolation in the ranks of our most highly esteemed, great association. I cannot better express what is in my mind to-day than to quote from an eminent New England prelate, "Life is so very short for all of us, shorter still to those of us who are eager to do something that will not perish when we die. The years fly by at a thundering pace which frightens us with its dreadful speed. And when it is over and gone, the one thing that will last will be the memory that we have left behind us in the hearts that loved us, in the souls which understood our purposes, and which beat in unison with our noblest impulses. That is our only legacy—the only one really worth leaving to history and posterity."

And now, gentlemen, in accordance with the custom of my predecessors, the thirty-fifth annual meeting of the American Laryngological Association is declared open and ready for business, and I thank you for your co-operation in making up the program and bespeak your active interest to carry it out to a successful termination.

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2. Transactions of 1879, p. 36.
3. Peacock's life.

354 Commonwealth Avenue.

INDICATIONS FOR THE CORRECTION OF DEVIATIONS OF THE NASAL SEPTUM BY THE GLEASON OPERATION.*

DR. E. B. GLEASON, PHILADELPHIA.

The title of this paper necessitates a comparison of the advantages of submucous resection for the correction of deviations of the nasal septum over older methods and also involves the question of personal equation. For the individual operator, other things being equal, the operation with the technic of which he is most familiar will be the best. However, for the beginner in laryngology, my method has the advantage of being quick, easy, free from risk and requiring no great skill. Deformity of the tip of the nose never occurs and perforations very seldom; while in case of failure, the procedure does not interfere with a subsequent submucous resection.

Perforations after submucous resections are apparently frequent. If of considerable size and if no scar-covered bone or cartilage is exposed the so-called "scabs" do not collect and the perforations apparently do no harm. Knowing this fact, some operators have advocated the removal of mucous membrane as well as cartilage and bone when it is impossible to elevate the periosteum from the deviated area and thus cause a large perforation. My feeling is that rather than resort to this expedient it would be better to avoid a perforation by converting the resections into a Gleason operation.

As regards deformity following submucous resections from sinking of the bridge or tip of the nose, a distinguished operator who has probably done more than any other American to develop the submucous operation, stated that in traumatic cases, when the tip of the nose is flabby, the submucous operation is contraindicated because of probably resulting deformity, and that my operation, under such circumstances and others, is the proper procedure.

It has been stated that a submucous resection in individuals under 15 years of age interferes with the development of the rest of the nose. If this is the case my method or some similar procedure should be the operation of choice.

*Read by invitation before the section on Laryngology and Rhinology, of the New York Academy of Medicine, October 22, 1913.

If, in the early stage of a resection, the patient collapses either from cocain poisoning or syncope and it is necessary to finish quickly, it would be better to convert the resection into a Gleason operation. The same is true when a hemorrhage of unusual severity is encountered. The Gleason operation can always be done in less than two minutes.

A submucous resection under ether is difficult and unpleasant. When it is necessary to operate under ether, especially in children, the Gleason operation should be the operation of choice. The same is true of operations on the aged or feeble.

The Gleason operation consists of a U-shaped incision surrounding the deviated area of the septum except above. Because of the leverage involved, the vertical crura are carried as high up as possible. Because the base of the U is an incision through the hard bone of the nasal processes of the maxillary, or through the vomer, it must be made with a saw, a strong Sajous saw being best for the purpose.

Submucous resection is more successful than the older operations mainly because the removal of bone and cartilage completely destroys the resiliency of the deviated area. This resiliency is the chief cause of failure in all the older operations for septal deviation; and the next best way of overcoming it is by means of a quadrilateral flap. I made a rough model of a deviated septum by thrusting a hollow rubber ball through a hole in a piece of cardboard. On this bulging area of rubber I did the Ash operation, at that time the most popular of the operations for the correction of septal deviations. I also performed other operations then in vogue and demonstrated that the cause of failure was the triangular shape of the flaps, and that a quadrilateral flap resulting from a U-shaped incision in the rubber bulb where it bulged through the cardboard, because of the principle of leverage involved, so completely neutralized the resiliency of the rubber that such a flap would not spring back into its original position when pushed inside the rubber ball. Triangular flaps did.

The technic of the operation is as follows: After thorough cocaineization, a nasal saw is introduced into the obstructed nostril close to the nasal floor beneath the bulging area. The sawing is horizontal until the saw has penetrated somewhat deeply into the bone. Thus the edge of the saw is gradually tilted up until the direction of the sawing is more vertical. A gush of blood from the unobstructed nostril indicates that the bone has been penetrated. The tip of the saw is now thrust through the opening in

the septum and the base of the U-shaped incision is completed by sawing at first backward and then forward. Pains should be taken to see that the base of the U-shaped incision extends well anterior and posterior to the deviation. The vertical crura of the U-shaped incision are best made with knives, one curved on the flat (Seiler knife) being convenient for making the posterior crus of the U-shaped incision. The lower edge of the flap is pushed into the unobstructed nostril with the forefinger-tip and the neck of the flap bent as nearly a right angle as the width of the nose will permit. *The whole success of the operation, in horizontal deviations at least, depends on the thorough bending of the neck of the flap.* The patient remains seated, but the operator should stand up and place his disengaged hand on the top of the patient's head in order to bend the septum upward with greater force. The bone at the neck of the flap breaks with a snap audible all over a large room. The resiliency of that part of the flap is of course as absolutely destroyed as if a submucous operation had been done. The cartilage at the neck of the flap cannot be broken, but it can be bent and kneaded until its resiliency is at least temporarily gone. After the operation, *unless the flap is perfectly flaccid and there is no tendency for the flap to spring back into its former position, the operation will be a failure.* Overlapping of the edges which occurs in all of the older operations on the septum will not prevent this in the least, even if the edges are beveled as done by Watson. The exploiting of the resistance offered by overlapping flaps which occurs in all operations for septal deviation devised before Watson's time, more especially that of Seiler which I did for many years before devising my own, induced Watson to claim that my operation was the same as his and later on a modification. Nothing could be more untrue. One operation depends for success on the utilization of the resilience of overlapping flaps (not originated by Watson), and the other on the destruction of the septal resilience. This is best accomplished as already stated by complete removal of the resilient cartilage and bone by submucous resection, and next best by the use of a quadrilateral flap, which I was the first to employ.

It is very evident that my operation is not indicated where the deviation is high up and the operation is done to secure better drainage from or access to the ethmoid region of the nose. In many cases of this kind better results are obtained by removing the middle turbinate than by operating on the septum. In fact, before operating on a deviated septum the condition of the tur-

binates should receive careful consideration. If the inferior turbinate opposite the convex side of a deviated septum is so atrophied that straightening the septum will render one nostril so patulous that that nostril is unable to perform its chief function of warming and moistening the inspired air, that is, if after a submucous resection the formerly obstructed nostril is so patulous that you can see through it into the pharynx, the patient will not be benefited, but harmed by the operation.

The operation I devised is also not indicated when the quadrilateral cartilage is large and resilient. In such case probably it will prove only partially successful, and submucous resection is far superior except in the so-called "vertical" deviations where only a very narrow portion of the septum is affected. In such cases, because of the principle of leverage involved in long, narrow flaps, the operation is always brilliantly successful.

After the operation I generally introduce a tube into the formerly obstructed nostril. This is removed and cleansed at the end of twenty-four hours. It is allowed to remain for another twenty-four hours and then permanently removed. In those operations where the resilience of the flap was not destroyed, but there was a tendency for the deformity to be reproduced, I formerly tried to secure at least a partial success by compelling the patient to wear a tube for a week or more. I now remove the tube permanently at the end of forty-eight hours and allow the parts to heal, and if the operation is only a partial success I either destroy the resiliency of the neck of the flap by a submucous incision of the cartilage with a knife or the use of Fetterolf's files, or I do a submucous resection which, as I have already explained, is not rendered impossible by the previous operation. The U-shaped incision is *not within* the deviated area, but *around* it except above, and its scar, therefore, cannot possibly be in the way of an operator who wishes to remove this deviated area by a submucous resection.

2033 Chestnut Street.

AUTOGENOUS VACCINE IN THE TREATMENT OF HAY-FEVER.

DR. P. M. FARRINGTON, MEMPHIS, TENN.

With well-trained minds of the highest order, with wealth and government backing, the laboratories of to-day are elevating medicine by leaps and bounds. Matters of doubt become living facts, and the knowledge of yesterday is disproved in many instances.

So thick and fast do the announcements come that men in active practice have not the time or training to know definitely or weigh with proper judgment the testimony offered. We, therefore, must accept with a certain amount of blind faith the wonderful means placed at our disposal for use in our fight against disease. The subject of immunization by the use of vaccines has appealed strongly to the medical world.

Many investigations have been made in various lines. Some have resulted brilliantly, while others have been failures. Following a happy experience in the case of a chronic discharging ear, where the autogenous vaccine was used, it occurred to me that its use in hay-fever would be indicated. In August, 1911, I tried it out for the first time in a case of five years' standing. The result was most gratifying, and I reported the case at the Southern Section of the American Laryngological, Rhinological and Otological Society, meeting in New Orleans, February, 1912. Throughout the fall of 1912 I treated a series of twenty-five cases with excellent results. With but one exception these cases were of years' standing and had tried every known remedy without relief. All the patients were from my private practice and could be watched carefully.

It was my intention to have these patients under observation before the hay fever season started, that I might correct any abnormality present, such as polypi, hypertrophied turbinates, deflected septum, sinus disease, etc. In other words, I proposed to put the nose in as normal a condition as possible and await the oncoming season. If, despite these efforts, they developed hay-fever, use the vaccine.

This plan did not work for the very good reason that the majority of my patients presented themselves only after the onset of symptoms, or so very little in advance of the time that surgical measures were not to be considered. It thus happened that in this series were several cases of marked deflection of the septum, together with hypertrophy of the turbinates, which should have been operated before good results could be hoped for.

The series was divided into four groups: those that were cured; those that were markedly improved; those that were improved; and those that were failures. The results were as follows: Out of the twenty-five patients treated, thirteen or fifty-two per cent were cured; six patients or twenty-four per cent markedly improved; three patients or twelve per cent slightly improved; three patients or twelve per cent failures.

Of the thirteen patients cured, eight were complicated by asthmatic attacks. Of the six markedly improved, five had asthma. Of the three slightly improved, all had asthma. Of the three failures, all had asthma.

The vaccine was prepared as follows: After the nasal symptoms had developed a sterile platinum loop was passed well up along the middle turbinates, and the film of secretion transferred to sterile agar tubes.

The patients were instructed not to use medicines of any kind twenty-four hours before the secretion was to be removed. Two tubes were used in each case and the combined growth washed off with sterile normal saline solution. The bacteria were then killed by heat, standardized, and placed in two-ounce bottles with inverted rubber nipple for stopper. In this way the vaccine could be drawn out by plunging the hypodermic needle through the nipple, and the danger of contamination reduced to a minimum. In this connection I am glad to say that no abscesses were produced by the injections throughout the series.

The average number of injections was nine. The dose best suited was found to be 200 million every fourth day. Larger doses were tried in a few instances, but no especial benefit noted.

In several cases where the dose was increased to 400 or 500 million, a rather marked reaction with the increase of hay-fever symptoms occurred, necessitating a skip of six or eight days in the treatment. Improvement may not be expected until three

doses have been given. Some cases eventually cured did not show improvement until the sixth dose had been given.

In my humble opinion, autogenous vaccine offers decidedly more in the treatment of hay-fever than all other known methods combined. Its indiscriminate use, however, without a careful inspection of the nasal passages, coupled with sufficient skill and knowledge for the correction of gross pathological lesions within the nose, and accessory sinuses, will prove a failure, and will discredit an efficient remedy.

Bank of Commerce and Trust Building.

Operations on Nose in Treatment of Headache. FROESE, *Deut. med. Wchnschr.*, May 15, 1913.

Ten cases are reported which show the improvement in neuralgic and headache conditions following nasal operation. In only one case (where the man did not follow instructions) did slight nausea and fever result. The technic is minutely described. Friese feels that these interventions are not as dangerous as some think, that they are of great benefit and that, with care, they do not cause meningitis.

Ed.

Primary Syphilis of the Nose Treated with "606." M. ARTELLI, *Boll. delle mal. dell'Orecchio*, June, 1913, p. 126.

It is very unusual for the initial lesion to be in the nose. The case reported was in a man of 28 years; neoplastic type of lesion in right anterior portion of septum; hard indolent swelling in right submaxillary glands; Wassermann positive; roseola appeared shortly. Salvarsan was administered intravenously; after forty-eight hours improvement in nasal condition. Artelli recommends a combination of salvarsan and Hg.

Ed.

ETHMOIDAL ABSCESS CAUSED BY THE BACILLUS FUSIFORMIS OF PLAUT-VINCENT.

DR. F. H. BRANDT, BOISE, IDAHO.

Not until recently have we been regarding an ulcerative process, commonly known as Vincent's angina, as an infection of the throat only. Of late, however, in response to closer investigation, interest is growing as to the location in which this has been found.

Fruehwald¹ cites an interesting case of a little girl who had swallowed a sewing needle, which, upon examination, was found sticking in the posterior pharyngeal wall opposite the entrance of the larynx. This was extracted, but the needle broke off, and further attempts to remove the remaining piece were unsuccessful. In the next few days fever and rigidity of the neck developed, and an external operation was done to explore the tract of the needle. The needle was found in a fistulous tract with some pus. Meningitis developed and the patient died. The autopsy showed meningitis and brain abscess due to the bacillus fusiformis. Rothwell² publishes a case with chills, high temperature, severe pain, persistent cough and abundant watery-blood sputum, which was full of the Vincent organisms. Tunicliffe³ gives a case of general pyemia with multiple abscesses in various parts and organs of the body, following an appendicitis. *

Ghon and Mucha⁴ published three cases, of which the first one gave a clinical history of chronic lung tuberculosis. Autopsy showed tuberculosis in right lung, of both kidneys and in the right suprarenal gland. A putrid abscess was found in the right hemisphere containing the fusiform bacilli and spirochetes. The second case is one of appendicitis, with secondary abscesses in the right tibia, cerebro-spinal meningitis, abscesses in both kidneys, in left lung and the liver. The third case is similar to the second one. Kaspar and Kern⁵ cite two histories, very much like the above, in one the appendix being the starting point, and in the other one, very probably the cardia of the stomach. The above cases show us that almost any portion of the body may be invaded by this organism.

To the above I wish to add my case-report: Male, aged 54, with a history of supra-orbital headache mostly over the right side, duration about three weeks; no more than usual discharge from

the nose; no elevation in temperature. The headache seemed worse in the morning. Examination showed nothing external, no protrusion of eyeball or redness; pain could be elicited on pressure over internal orbital plate. Internally, left side negative. No discharge on right side, but the middle turbinate filled the upper nasal space. A diagnosis of ethmoid trouble was made with a probable frontal sinus involvement.

The operation, under cocain, consisted in an attempt to resect the front portion of the middle turbinate. This, however, was merely a shell filled with a cheesy material of a characteristic odor. Microscopic examination revealed the fusiform bacillus and the accompanying spirochete, and here and there other forms of bacteria; there was now no question as to the diagnosis.

The entire middle turbinate had to be removed, since a good deal of destruction had gone on in the ethmoid cells; both the anterior and posterior sinuses had to be taken out; the fronto-nasal duct was enlarged and the entire ethmoid cavity carefully curetted. This space was swabbed out with a weak iodine solution and lightly packed with xeroform gauze, and patient was given five grains of urotropin every four hours as a protection for any cerebral complication. Packing was removed the next day and the cavity repacked with a tampon of a 10 per cent solution of salvarsan in glycerin. This was left there one hour and repeated daily for four days. The headache rapidly disappeared and practically no pus was seen after the operation. In ten days' time the patient was sent home with instruction to cleanse the nose with a weak solution of iodine. Though it is a year since the operation, there has been no trouble or recurrence.

Twenty years ago, Plaut and Vincent, entirely independently discovered that this form of ulcerative angina is due to two different organisms, but in the last six years much more work has been done and it is now generally conceded that we do not have two distinctly different organisms, but that one is merely an evolutionary form of the other, always found together. This view seems to have been definitely proved by Tunncliffe.

Lasagna⁶ in his experiments came to the conclusion that the spirochete might be the primary factor, as he found the fusiform bacilli very scarce in the beginning. By inoculating necrotic tissue into guinea pigs he could produce much severer and more timely symptoms than by injecting the fusiform bacilli alone. Hence his conclusion.

In regard to treatment might be mentioned that Gerber⁷ has given salvarsan intra-venously with good results (0.5 and 0.6 grams were used). Rumpel⁸ reports seven cases with equally good results. On the local action of salvarsan, Achard⁹, Gutmann¹⁰, and Sourdel¹² have reported favorably. The salvarsan was suspended in glycerin. Zitz¹³ has also reported good results, by first irrigating with a saline solution and a 10 per cent solution of salvarsan, suspended either in water, glycerin or oil.

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209 Overland Block.

Sluder Method of Tonsillectomy. A. M. CORWIN, *Ill. Med. Jour.*, Jan., 1913.

In this paper Corwin lauds Sluder's method of tonsillectomy and describes the various modifications and improvements made in the instrument and accessory technic.

ED.

Malignant Disease of Tongue and Mouth. R. ABBE, *Med. Rec.*, March 15, 1913, p. 461.

From observations, during the last ten years, of 40 cancers of the tongue, 15 leucoplapias, 27 sarcomata of the jaw, 40 sarcomata of the pharynx and tonsil, and carcinomata and tumors in various other regions Abbe concludes that early radical operation is the only reliable procedure. Radium is effective in giant-cell sarcoma and in leucoplakia.

ED.

A LARGE CYST OF THE EPIGLOTTIS.*

DR. H. MOULTON, FORT SMITH, ARKANSAS.

According to Mischkin⁷ cysts of the epiglottis occur most often in men between the ages of 18 and 50 years. Dr. Crosby Greene³ of Boston, however, refers to the literature of three cases in infants which caused death by suffocation. No age is exempt.

Lenox Brown,⁶ Mischkin,⁷ Forsyth,³ and others regard cysts of the epiglottis as retention cysts. They are very rare. Noquet⁵ says they are rarer than cysts of the vocal cords. Moure² reports 117 cases of cysts of the larynx of which fifty were of the epiglottis. Morell Mackenzie⁸ publishes a drawing of a cyst of the anterior surface of the epiglottis. Several such cases are recorded. Most of the cysts reported are of small size, less than the size of a cherry, producing slight or no symptoms. Those as large as a hazel-nut are rare; larger ones very rare.

Hamilton² of Montreal records one as large as a hen's egg, said to be the largest on record; Beck,¹ one as large as a large hazel-nut; Greene,³ one that was one inch in diameter.

Most of the cysts reported were attached to the anterior or posterior surfaces of the epiglottis, base of the epiglottis, or to the lateral folds leading from the base to the pharyngeal walls. I find only one case, that reported by Beale,⁴ growing from the glosso-epiglottic fossa, the size of a cherry.

The treatment usually employed has been the snare, avulsing or cutting forceps, with or without electro-cautery. Beck¹ resorted successfully to lateral pharyngotomy after the other measures failed.

The case I wish to report bears the double distinction of being one of the very few large ones, and of arising from the very unusual location in the glosso-epiglottic fossa.

Mr. C., a lawyer, 37 years of age, of excellent general health and the father of healthy children consulted me on September 27, 1911. Two or three years before he had had a slight hoarseness which soon disappeared. For four or five weeks before consulting me he had been troubled with a gradually increasing feeling of fullness in his throat, which was now beginning to interfere with swallowing and speaking. Laryngoscopic examination revealed a large, smooth, yellowish-red tumor between the epiglottis and tongue on the left

*Read before the American Academy of Ophthalmology and Oto-Laryngology. Chattanooga, Tennessee, October 29, 1913.

side. The tumor displaced the epiglottis backward and to the right side and extended from the left lateral pharyngeal wall two-thirds of the way across to the other side. Its summit was somewhat higher than the crest of the epiglottis. In size it might be compared to an English walnut. It was firm to the touch and apparently without fluctuation.

In discussing the diagnosis the probability of its being cystic was considered together with the possibility of its being some such solid growth as a scaroma or gumma. At my request the patient saw Dr. J. E. Logan of Kansas City on October 6, who punctured the tumor and established the diagnosis of cyst. In four weeks the cyst had refilled. I punctured it again releasing about an ounce of viscid yellowish mucus. The next time it recurred I attempted to cut away as much of the cyst wall as possible with a Krause cutting laryngeal forceps. Of course at the first cut the sac collapsed and very little more of the cyst wall could be secured. A curette was pushed into the cavity hoping to irritate the walls and produce adhesive inflammation. The shape and situation of the tumor precluded the use of a snare.

After several recurrences and attempts to cut away the cyst wall an operation was finally performed on April 22, 1912. After opening the cyst this time, as before, the walls collapsed deep into the glosso-epiglottic fossa. The main attachment was a broad one, to the lower part of the anterior surface of the epiglottis, extending down to the bottom of the fossa. With the aid of the laryngeal mirror I was able to get a large electro-cautery point into the cyst cavity thoroughly cauterizing its walls in every direction. There was moderate reaction which soon subsided. To date after a lapse of eighteen months there has been no recurrence. The tissues in the bottom of the left glosso-epiglottic fossa remain very slightly thickened. Otherwise the parts are normal. Cocain was the anesthetic employed.

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- 206 Merchants Bank Building.

INTRA-NASAL OPERATIONS AND THEIR RELATION TO HEARING.*

DR. S. W. THURBER, NEW YORK CITY.

The subject of this paper was suggested to me as one on which a discussion could be very profitably entered into, both from the standpoint of a rhinologist and an otologist. I can produce nothing new or startling, but hope to bring out some points of common interest.

First, as to the physiological inter-relation of the nasal and otitic cavities. It is a fact, I think conceded by all, that the nose, accessory sinuses, pharynx, Eustachian tube, middle ear, larynx and so on further down are all ramifications of the same tract. Taking the nasal cavity as the beginning, normal conditions here from birth up give that individual the best protection against diseases of the pharynx and middle ear. Normal nasal conditions include three factors: (a) a balanced secretion (the right proportions between the serous and mucous elements to permit surface flow without irritation); (b) good ventilation as applied to the air currents to and fro; and (c) good drainage posteriorly into the pharynx. Anything which disturbs one or more of these factors will give rise to certain symptoms. If nature had not supplied us with a duplicate nasal passage, disturbances that are now tolerated would never have been allowed to run on to the extent now seen. This tolerance will become yet less and less as our patients are educated to the harmful effects of the *laisse faire* position. The less distressing intra-nasal conditions are now brought to the physician's notice where a few years ago they would have been tolerated as a matter of course and of little consequence.

This brings us, therefore, to the question of intra-nasal operations in the young as a matter of prophylaxis in saving the hearing. Here it is impossible to separate the naso-pharynx from the intra-nasal cavity proper, because of their very intimate association.

By reason of the proportionately large Eustachian cushions in the child, adenoids, when present in any obstructive degree,

*Read at the meeting of the New York Academy of Medicine, Section on Laryngology, April 23, 1913.

do more harm to the ears than any other condition; and even when not large enough to form an obstructive mass, their lateral tags and bands seriously interfere with the ventilation of the middle ear by restricting the action of the lips of the tube. To save the hearing in these cases the obstructing mass must be removed and especial care be taken to clean out the fossae of Rosenmueller. The question of the time in which to operate is important. Shall one remove adenoids during an attack of either acute catarrhal or acute suppurative otitis media? The otitis even of the so-called catarrhal type often follows a rhinitis or pharyngitis, and may be considered an infection. The large base left denuded after the removal of adenoids would theoretically offer many channels for a bacterial invasion; yet on the other hand, the continued presence of adenoids makes the resolution of the otitis more difficult and at times impossible. Accurate judgment in these cases is necessary, and it does not seem as if any hard and fixed rule can be formulated. In the chronically discharging ear, the case is different. One has waited for resolution in vain and operation is here clearly indicated. The same considerations apply to other naso-pharyngeal growths, but as their base is not apt to cover as large an area as that of an adenoid mass, their removal need not be delayed.

The common intra-nasal obstructive lesions in the child which interfere with proper ventilation and drainage of the middle ear, are hypertrophic rhinitis (that of the middle turbinate frequently associated with ethmoiditis) and septal deformities. A surprising number of children and young adults will present all grades of obstructive lesions of the nose without ever giving any symptoms referable to their ears, yet in the experience of later years one cannot escape the conviction that had these conditions been relieved when seen in the youth of these same individuals, the ears would have been saved insidious disease. In other words, operate in children to prevent mouth breathing. The kind of operation to perform on the septum of a growing child is important. It is a question whether an extensive submucous removal of the septal cartilage or part of the ethmoid plate is a wise procedure. Personally, I limit the amount of material removed to as small an area as is possible to obtain good function. After the removal of adenoids, there is often quite a grade of hypertrophic turbinate tissue to be taken care of, over the inferior bone especially, and this can best be re-

duced by lines of cauterization, for the bone itself will rarely be found to be too large to permit good nasal respiration. The removal of the hypertrophy of the posterior tip of the inferior turbinates is necessary when it is of sufficient size to interfere with the anterior lip of the Eustachian tube,

From the obstructive lesions in the nose and pharynx let us turn to the atrophic cases. The frequency of ethmoiditis in the young as associated with atrophic rhinitis would center operative procedures about the ethmoid cells. Of course if any of the other sinuses are involved these will also demand our attention. In any case, the harm of pus flowing over the nasal and pharyngeal mucous membrane, the irritation from crusts and putrefaction is well established. Infection of the middle ear often occurs, and atrophic changes follow in the tube and ear as they do in the nose.

The main difficulty in my mind in operations on the ethmoid cells is to effect a cure without at the same time making the nasal space too patent, filled with cicatricial tissue with its attending loss of secreting glands, and thus bringing about post-operative atrophic changes as bad, if not worse, than the original condition,—the absence of pus being the only difference. To remedy this, one might resort to the submucous injection of paraffin to build up, as it were, new turbinates; but this is hardly feasible in the middle turbinate region, especially in the young. Operation for prophylaxis in adult is indicated along the same lines as already mentioned, i. e., putting the nose in as near a physiological condition as possible as to ventilation, drainage, and balance of the elements of the secretion. A few things may be added in the line of obstructive lesions more common in adults than in children, such as polypi, septal traumatism, hematoma and abscess, dislocations, spurs and ridges, and in the atrophic varieties the involvement of all the sinuses now fully developed. Patients coming to us with any of these lesions will often complain of some loss of acute hearing; and if we are to prevent further extension of middle-ear disease, intra-nasal operations are indicated.

But what about the slowly advancing chronic catarrhal otitis, where the examination of the nose reveals no mal-secretion and there is good ventilation and drainage yet certain abnormalities exist, either unilateral or bilateral that would interfere with proper treatment of the aural condition. A common example is

a low ridge interfering with the passage of the Eustachian catheter. Shall the catheter be passed through the opposite naris or shall the ridge be removed? Or, if it is possible to inflate the ears by Politzer's method, would the fact that one naris was moderately blocked have much influence on the ear on that side, when the pharynx is roomy and good ventilation is established through the less-occluded naris? I think all of us have seen patients with chronic catarrhal otitis in the ear on the side of the normal naris, as far as we are able to judge.

It is a vital question what benefit we are able to promise to patients who have let a slight amount of deafness go untreated by advising them to undergo intra-nasal operations. There is more hope of saving a slightly damaged middle ear than one in which adhesive changes have been long and firmly established, and it is therefore in these cases of early recognized deafness that most can be hoped for by intra-nasal operations done for the purpose of putting the nasal interior on a normal physiological basis. Treating the ear alone without attention to intra-nasal conditions is not doing our patients justice. In the advanced cases where there is *some* nasal abnormality yet not enough to interfere with function, I doubt if any operation in the nose will aid in retaining or restoring the hearing.

There is another side of this subject to consider. Does any class of intra-nasal operations tend to *produce* middle-ear complications and perhaps a resulting deafness? There is, first, the danger of infection, especially where it is necessary to pack the nose. Long retained packing is almost sure to result in otitis media, especially if the operation be accompanied by much bleeding. Most packing should be partially removed as early as possible, so as to establish some ventilation and drainage below or above it. Packing comes out easier and is not as apt to re-establish hemorrhage if left in forty-eight hours, but that is too long a time in many cases.

Second, extensive intra-nasal operations are harmful in that they make the nose *too* patent and producing a condition similar to atrophy. Happily the day has arrived when the destruction of more or less of the intra-nasal mucous membrane has ceased and the sub-mucous operations have taken the place of the older methods. The removal of the inferior turbinate body in part or in whole is not now done as it used to be, so that the harmful results, obtained by replacing cicatricial tissue for secreting

mucous membrane as affecting first the nose and thereby the pharynx and middle ear in producing atrophic conditions, are not seen.

Finally, the whole question of the relation of intra-nasal operations to hearing—either its preservation or attempts at its restoration—hangs on the condition of the nose as to the balance of secretion, normal ventilation and normal drainage. If these functions can be retained or restored by operative measures in the nose, the rhinologist has done all he can to save the ears from pathological changes.

104 East Thirty-ninth Street.

Paralysis of the Recurrent Nerve Due to Circulatory Lesions.

J. W. GLEITSMANN. *Med. Rec.*, Feb. 22, 1913.

Our distinguished colleague considers this important topic in a very interesting paper, divided into five chapters: (1) Physiological remarks; (2) recurrent paralysis from heart lesions in general; (3) paralysis in connection with mitral stenosis; (4) aneurysm; (5) therapeutics.

He has searched the literature and offers histories of a number of cases to substantiate the above-mentioned causes. Rheumatism is mentioned as a possible factor in the production of recurrent paralysis, but the author warns us to be careful in attributing the lesion to this affection, as by a longer observation under modern therapeutic means we may be able to find a true pathologic lesion.

Surgery has been successful in a few cases in bringing back the function of the nerve. Bruenings reported good results from injections of paraffin into the vocal cord. Two applications were made. In the first treatment, three injections were given, in the anterior, middle and posterior portions of the cord, and after five or eight days the interstices were filled out. The voice was improved in one case, with an old bronchitis; great relief was experienced by being able to expectorate. No ill effects were observed in the treatment.

LEDERMAN.

GRADENIGO'S SYNDROME.—ONE CASE-REPORT AND AN ANALYSIS OF THE PUBLISHED CASES.

DR. H. B. GRAHAM, SAN FRANCISCO.

Gradenigo, in 1904, described a paralysis of the external rectus muscle occurring in acute suppurative otitic cases which together with other symptoms has become known as Gradenigo's syndrome. I presented in 1911 before the San Francisco County Medical Society, a case exhibiting this syndrome, the history of which was as follows: Early in June pain in right temporal region followed by suppuration of the ear and on June 22, operation with primary closure. Following the operation the patient complained of pain in the top of the head which persisted for months after all other symptoms had cleared up. Patient left the hospital ten days after the operation and was re-admitted July 9, complaining of double vision. The wound was opened, the clots and serum were removed; no pus found. Following this for a number of days there was headache in right frontal quadrant, burning sensation in lids on the right, gurgling sound back of the right ear, sleeplessness, dreaming and diplopia.

The various examinations gave crossed diplopia, right abducens paresis, movement out very little beyond median line, objects to the left and those in front at not more than twelve inches seen singly, those anywhere to the right seen double. Iris and corneal reflex normal, no ptosis. Superficial skin reflexes normal, deep reflexes strong, no Babinski, no ankle clonus. Fluid from spinal puncture ca. 9 ccm., clear, light-straw color, albumen normal, no sugar, no cellular deposits after centrifuging. On October 30 the patient had entirely recovered. I judged at the time that the primary closure of the wound was responsible for the abducens paralysis producing a meningeal irritation in the middle fossa and am inclined, after reviewing the literature, to accept this explanation.

Chas. E. Perkins has collected ninety-five cases which he has analyzed and to those collected by him I am able to add thirteen more. In these 108 cases the causes of the abducens paralysis were ascertained in only thirty-six with any degree of certainty. Of these, the causes were sinus thrombosis in two, meningitis in six, labyrinth disease in four, abscess in posterior fossa in nine,

in middle fossa in two, osteitis or disease of the petrous tip in thirteen.

But few autopsies were recorded in this series, most of them showing a purulent meningitis at the base of the brain, two recording a necrosis at the apex of the petrous portion of the temporal bone and one, Coulet's, a sarcoma. In Terry Smith's case there was a teacupful of serous fluid let out of the meninges at operation.

Reasoning from the pathology that we see in cases exhibiting similar symptoms in other parts of the body, third, fourth, eighth and ninth nerves, we might well be led to believe that it could be a variety of causes that could lead to this paralysis. If pressure, toxemia and an acute inflammation can all cause paralysis of the vocal cords, why can they not also be active causes of a paralysis of the sixth?

Baldenwick's cases were undoubtedly due to meningitis at the apex. Coulet's case was undoubtedly due to pressure of the sarcoma; Terry Smith's to pressure of the serous fluid in the meninges. The fact that so many recover would lead one to suspect that some very simple cause such as a transient hyperemia or a toxemia, as Tomassi suggests, alone was the fundamental basis for the syndrome. I personally consider that the most frequent cause is the local hyperemia and believe that in my case it was present when the pain in the vertex was complained of, that is, immediately after the operation.

Koellner throws some light on the general subject by giving an interesting analysis of 250 cases of sixth nerve paralysis occurring in the Berlin University Clinics of which 209 were paralysis of the sixth nerve alone. I append a table of causes as he found them:

Intoxications: Alcohol, 3; lead, 2; arsenic, 1, lumbar anesthesia (Stovain.), 1. Infections: Malaria, 1; influenza, 3; erysipelas (facial), 1. Diseases of kidney, 10. Diabetes, 1. Circulatory system, 5. Diseases of brain and spinal cord: Meningitis (chron. and tb.), 5; lues, cerebri, 13; lues, hereditaria, 2; tabes, 70; sclerosis multiplex, 7; polioencephalitis, 2; ophthalmoplegia chron. progressiva, 1; brain tumor, 13. Myasthenia gravis pseudoparalytica, 12. Hysteria, 3. Hemicrania, 4. Vasomotor dist., 4. Traumatic, 8. Otitic, 4. Paral. without known cause, 31. Congenital, 9.

That those paralyses accompanying otitic disturbances are not all due to the same cause he believes is shown very conclusively

by his reference to the four cases of Passow included in his table. One was, in all probability, due to a local serous meningitis; the second, on account of both nerves being involved with a one-sided ear affection, was in all probability due to a lead toxemia, the man being a worker in lead. The next died of a suppurative meningitis; the fourth had a probable alcoholism as a contributing cause.

These various causes of this very interesting syndrome have been aptly grouped by Alt (According to Schwarzkopff, *Die otogene Abducenslehm. Zentralblatt für Ohrenheilk.* Bd. 5, Heft 5.) as: 1. Reflex from the vestibulo-eye muscle nuclei. 2. Infectious neuritis. 3. An extension of an inflammatory process to the sinus cavernosus from the venous channels of the carotid canal. 4. Pressure paralysis through a serous arachnitis. 5. Deep disease of the temporal bone and a meningitis at the tip of the pyramid. To these may be added (6) a toxic neuritis.

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 209 Post Street.

Acute Lesion of the Tympanic Membrane Due to the Use of the Telephone Receiver. E. FABRI, *Boll. delle Mal. dell'Orrecchio*, March, 1913, p. 49.

The author points out the peculiar injury to the tympanic membrane which results from the sudden change in air-pressure when the telephone receiver is held tight to the ear. Two cases of perforation in hitherto healthy membranes are recorded. As a preventative to such accidents the author recommends care in holding the receiver to the ears.

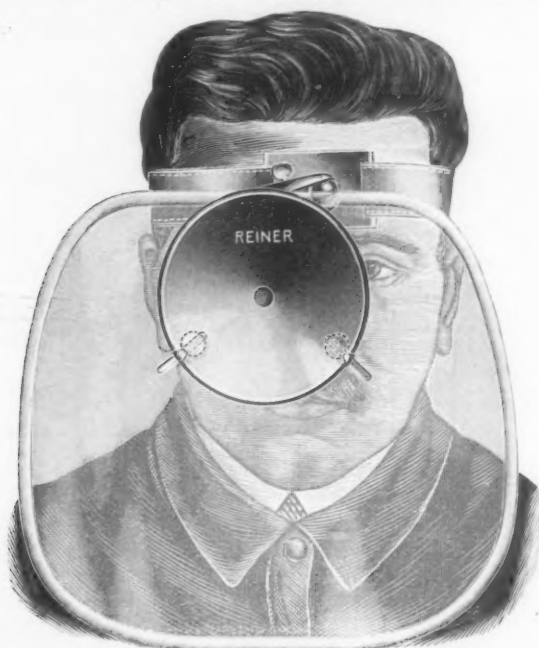
Ed.

A FACE PROTECTOR.

DR. FRANKLIN E. CUTLER, CLEVELAND.

A number of years ago a New York professor called attention to the fact that in treating throats, if a glass was held in front of the doctor's face, the glass was covered with a fine spray from the patient's coughing.

For the treatment of throat infections I have devised this simple shield (see cut) which has practically no weight and can be adjusted to any ordinary head mirror in no time. The transparent shield has a hole through which the ball on the back of the mirror



passes, and it is fastened below by clamps, which, after adjustment into position, are screwed fast. I have made another hole in the shield behind the "peek-hole" in order not to have the slightest obstruction to vision. This is not necessary, but as the composition-material of which the shield is made becomes scratched in time it necessarily interferes with perfect vision. By securing a plain lense to the back of the mirror as one of my friends has done complete protection is obtained. I have been using this shield for several years and at times it has been, to say the least, a great comfort.

936 Rose Building.

A NEEDLE FOR INTRA-NASAL SUTURING.

DR. CHARLES NELSON SPRATT, MINNEAPOLIS.

Accurate approximation of the edges of a wound promotes rapid healing, and leaves a minimum scar. In the submucous resection, the writer, for a number of years, was content to hold the flap in place by packing, as the application of sutures was time-consuming and often difficult. There was, however, always some retraction of the edges of the wound, with scab formation, which delayed healing and in some cases gave rise to crust-formation.

For the past six or seven years, the needle and holder, shown in the illustration, has been used with entire satisfaction in suturing the incision of the submucous operation. A fine sewing machine needle is heated in a Bunsen burner until it is cherry red, and a sharp bend of about 20° is made just back of the eye. The bend is made so that the groove in the needle is on the convex side. Unless overheated, the steel retains sufficient temper to give the required stiffness. Any curve desired can be given the needle. The full right angle and 45° curve have not been found to be of as much service as the curve shown in the illustration.



Originally the handle consisted of a split canula from an old tonsil snare into which the butt of the needle was placed. Mr. Mueller has improved this by using a piece of steel spring tubing with cross cuts.

Fine black collodion silk is used for the sutures. The anterior edge of the incision is penetrated by the needle, and holding the free edge of the flap with fine forceps the needle is pushed until the eye is beyond the puncture. On withdrawing the needle slightly, the thread forms a small loop which is grasped with the forceps, while the needle is withdrawn. An incus hook is useful for catching the loop and as an aid in tying the knot.

If the muco-periosteum is accidentally perforated on the opposite side a properly placed suture will generally close this. Unless the flap is torn drainage must be secured by an incision in the flap. If this is made posteriorly no annoying crusts will form, as the parts are always moist. Packing the side of operation for twelve hours is advised, as the swelling is less, and hematoma formation is avoided.

900 Nicolett Avenue.

**SHARP TONSIL DISSECTOR WITH DOUBLE PILLAR RE-
TRACTOR. MODIFIED JANSEN-MIDDLETON
NASAL SEPTUM PUNCH.**

DR. SAM GOLDSTEIN, NEW YORK CITY.

Tonsil-dissector: Distinctive points of difference between this instrument and the other tonsil enucleators in general use, have induced me to publish a brief description of its most important parts.

The handle, with deep corrugations, or ridges, is strongly fashioned, to afford the operator a firm grip. The spoon-end, or dissector, is long and fairly narrow, with smooth surfaces curving gradually, and terminating in a circumference or edge, sufficiently sharp to allow ease of complete dissection with a minimum of pressure, except in such cases where old adhesions require severance. The reason for having the border of the dissector spoon-end sharp is a rather obvious one, although adopted as a result of observation in the use of dull and milled-edge enucleators, which even in skillful and careful hands, necessitating using considerable force, and often were productive of much trauma, hemorrhage and frequently in-



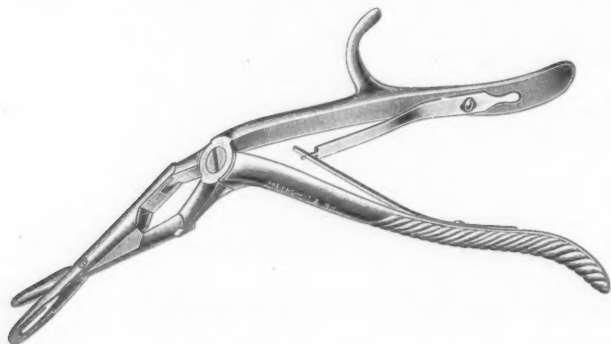
complete tonsil enucleation, requiring a good deal of punchwork for the removal of tonsil bits and shreds of tissue. At the other extremity of the instrument is the retractor, bifurcated by a deep groove; thus forming two retractors.

A pillar retractor of this construction is applicable to any form of anterior tonsillar pillars encountered in our work, whether using either segment or the retractor in its entirety. When either one of the retractors is applied to the supravalar margin, it will be found to fit admirably, permitting full retraction for a free inspection of that part of the tonsillar fossa so often the site of a detached portion of the diseased tonsil, which, if not removed, remains the nidus of subsequent infection.

Again, in operating upon tonsils which have become an ever present menace to the patient's health, from repeated inflammatory attacks, or as the site of previous abscess formation, where tabs of tissue are found adhering to the anterior pillars, even after the most careful enucleation, applying the full retractor to the anterior

pillar forces these bits to emerge, nipple-like in appearance through the groove dividing the retractors, readily permits their removal with the punch forceps, and at the same time avoids any trauma and ever-present danger of pillar mutilation, especially when the operative field is not constantly kept free of blood.

Modified Jansen-Middleton septal punch: This simple addition to the Jansen-Middleton septal punch was devised for the purpose of holding the bite within its jaws, when employing this forceps, and thus obviating the necessity of introducing another instrument to remove punched-out fragments which have been forced through its fenestrated jaw and dropped between the (elevated) septal flaps, or fallen to either side of the ridge or vomer.



Considerable time was necessarily consumed in searching for and in extracting these bits, especially if the operative field was at all obscured by blood; but with the punch in its modified form, the operator sees the result of his bite held within the collar at each withdrawal of the instrument. This collar is a narrow, thin metal plate connected with the external surface of the fenestrated blade of the jaw, and does not, in any manner, add to its bulk, as its surface is smooth and sufficiently wide to firmly hold the detached part when bitten through by the punch.

The illustrations of these instruments clearly show the purpose of their construction, without a more detailed description.

1211 Madison Avenue.

SOCIETY PROCEEDINGS.
NEW YORK ACADEMY OF MEDICINE.

SECTION ON LARYNGOLOGY AND RHINOLOGY.

Regular Meeting, May 28, 1913.

WILLIAM W. CARTER, CHAIRMAN.

Report of a Case of Acute Dyspnea in a Child 4 Months Old. Extubation.

Recovery. DR. C. JOHNSTONE IMPERATORI.

P. S., 4 months old had always nursed well from birth and was generally considered by parents and neighbors, a healthy infant. Early in the morning of March 26, 1913, the mother noticed that the child was breathing rapidly and that it could not nurse. The night before the child appeared to be in his usual good health. At 5 a. m. March 26, dyspnea and slight cyanosis began. The patient was first seen at 1 p. m. same day.

Physical examination made at this time showed a well-nourished male child of 4 months. No signs of rickets. Pulse, 140; temperature, 104°; respiration, 60; skin pale, lips purple and mucous membranes dark blue. The breathing was high-pitched inspiratory type with a marked shortening of the expiratory element with the accessory muscles of respiration being brought into action. There were a few moist rales scattered through the chest and over the large bronchi anteriorly. Heart sounds were normal in character, but the beat was markedly accelerated. Throat and mouth—mucous membrane glazed and dry—otherwise negative. Digital examination of larynx showed both arytenoids soft and boggy. Epiglottis felt normal. Cough was slightly croupy in character. Intubation and injection of diphtheria antitoxin was advised but refused.

At 7:30 p. m. the same day the case was again seen. The general condition of the child was worse—marked prostration and relaxation. The child had not nursed since the night before, that is about twenty hours. Pulse, 160; temperature, 105°; respiration, 70. The skin was paler, fingers and toes blue, and lips and mucous membranes purple.

Intubation was again advised and the parents consenting, a one-year size tube was introduced into the larynx. The epiglottis now was considerably swollen by hooking it forward and getting the tube and introducer in a more perpendicular position—the swollen epiglottis seemed even to facilitate getting the tube in place. 1,500 units of diphtheria antitoxin were given at this time.

It might be of interest to note that immediately after placing the tube within the larynx the child became unconscious, corneal reflexes disappeared, pupils moderately dilated—but the breathing became slower and fuller, and the heart sounds stronger. The child was not further disturbed—for the blueness of the finger tips and toes could be seen to be

disappearing, and the lips and mucous membranes of mouth appeared a brighter red.

Within 15 minutes after intubation the child awakened and successfully took the breast. The general improvement was immediate; within twelve hours the tube was coughed out and, there being no immediate necessity, it was not replaced. Within three hours after intubation the rales in the chest had disappeared. Cultures taken from the neighborhood of the larynx and from the tube were negative for Klebs-Loeffler. A second culture taken a few days later was also negative.

Twenty-four hours after coughing up the tube, the child had a severe fit of coughing and strangling, with considerable gagging. Nothing was vomited but considerable bloody froth and blood came up. The temperature gradually fell and within 3 days was 99°; respiration, 30, and pulse, 100.

Thirty-six hours after injecting the antitoxin the right wrist swelled and was very painful for a few days.

Conclusions: (1) Extubation was indicated because of the increasing dyspnea and cyanosis. (2) One massive dose of antitoxin produces better results than smaller repeated ones. (3) The fact that the child recovered, and its age, precluded against a foreign body producing the dyspnea and cyanosis. (4) No direct laryngoscopic examination was made—this should have been done. (5) The fact that the cultures were negative, mean that the swab, in taking the culture, was not in contact with the infecting material. (6) The edema of the epiglottis and arytenoids was due, directly to the tracheal obstruction. (7) The coughing and strangling that came on twenty-four hours after auto-extubation may have been due to an adductor spasm, but it would seem rather late for this to occur.

It is possible that this strangling and gagging was due to a dislodgment of diphtheritic membrane and the piece was swallowed. It would appear that this was the case—thus enabling us to account for the blood, and that this was a case of tracheal and bronchial diphtheria.

DISCUSSION.

Dr. JACKSON said that he hardly felt competent to discuss the case, but it reminded him of one he had seen where there was an acute laryngeal stenosis in which the clinical diagnosis was diphtheria. Intubation was done and antitoxin administered. The father of the child was a prominent bacteriologist. The culture was negative throughout the attack, and yet it proved to be a case of true diphtheria, and the child is now under treatment for post-diphtheritic stenosis. Dr. Lynah would probably refer to this class of cases in his paper.

Lantern Demonstration of Laryngotomy and of Plastic Operation for the Formation of Adventitious Vocal Cords. DR. CHEVALIER JACKSON.

Dr. Jackson (by invitation) gave a lantern demonstration of his operation for the relief of laryngeal stenosis, particularly the reduction of hypertrophic supra- and infra-glottic post-diphtheritic hypertrophic stenoses, and of his method of plastic operation upon cicatricial bands for the formation of adventitious cords. He said he believed he was the

first to demonstrate that, in all forms of laryngeal work involving destruction of the cords, the greatest factor in the production of a useful adventitious cord was full activity of the corresponding arytenoid, and for this reason he had always been exceedingly careful in planning an operation to avoid damage to the crico-arytenoid joint, and to as great an extent as possible to avoid injury to the arytenoid musculature. His lantern slides illustrated a large number of cases of many forms of laryngeal stenosis which he had relieved by the operation demonstrated. He continued to get good results from endoscopic galvano-puncture in tuberculous stenoses. He also got good results in papillomatous stenoses by repeated removals followed by the application of alcohol, but he believed that the treatment by fulguration, as advocated by Harmon Smith, and by radium, as advocated by Thomas J. Harris, were both methods full of promise. In regard to acute primary diphtheritic stenoses he had had very little experience, and therefore would listen with much interest to Dr. Lynah's paper. His experience has been confined chiefly to the post-diphtheritic condition.

DISCUSSION.

Dr. MacKENTY expressed himself as loth to begin the discussion, since his experience was very small compared to Dr. Jackson's. In regard to papilloma of the larynx, he thought that the removal of the growth as fast as it appears gives the best chance for recovery. Rest by tracheotomy was the most important point of all. He had not seen better results from fulguration than has been accomplished by the removal of the growth as it occurs. In the work which he has seen in Europe they favor removal rather than fulguration. Some years ago when he was in general practice, autopsy was made on a child which died immediately after birth, and it was found that the death was caused by an atresia of the larynx. Dr. Jackson had spoken of such cases being possible, and that recalled this case to his mind, though he was not prepared to state its exact nature.

Five years ago he had a case of laryngeal obstruction due to trichinosis. It had developed to such an extent that the larynx was practically closed, and intubation was necessary.

Dr. MacKenty said that he had been much pleased with Dr. Jackson's remarks regarding the extensive removal of adhesions in post-diphtheritic conditions. Nothing short of the removal of the bands causing atresia will give anything like a good result. He also agreed with Dr. Jackson that it is well to leave the arytenoid body for its aid to some extent in restoring some sort of vocal band. The case which Dr. Jackson had described where the cicatricial tissue took the place of the vocal bands was extremely interesting. It was probably due to the fact that the arytenoids were left behind and by their constant pull they formed a sort of vocal band. Low tracheotomy in order to close the laryngeal wound is a very important point. When abroad he had seen some difficulty in closing these wounds, and it has never occurred to him that it was due to the air pressure in breathing and coughing. That point will be of great advantage to all who are doing this work. Some years ago, he did a thyrotomy for cicatricial contraction. The larynx was opened and was found to have practically closed. Incision was made on both

sides, cutting the larynx into three parts. It was kept open with packing until the fragments cicatrized in a new position and then allowed to close (a sort of laryngostomy) sufficient lumen was restored to improve patient's breathing.

The Section was certainly under obligations to Dr. Jackson for coming this evening and presenting out of his vast experience so much that was unfamiliar to most of them.

DR. HARMON SMITH said that a few years ago a case of laryngeal stenosis had been referred to him by a specialist who had previously done a tracheotomy for the relief of the stenosis. Examination of the larynx showed it to be completely webbed over between the two vocal cords, with only sufficient space left in the posterior commissure for the passage of a small probe. Through this opening he passed a probe down into the tracheal wound, to which a silk string was attached, and by means of a "to and fro" motion, one end extending through the tracheal wound and the other through the mouth, he was enabled to cut the stenosis. Following this he introduced a soft rubber catheter up through the tracheal wound into the larynx and kept it there for a space of about a week, moving it daily, so that no adhesions formed around it. At the end of this time the parents insisted on removing the child from the hospital, and it became necessary to take out the rubber catheter and leave the tracheotomy tube in place. He felt sure that the stenosis would again recur, but he had been recently informed by the surgeon who had first had the case in charge, that there had been no recurrence, and that he was able now to remove the tracheal tube, and the child had perfect respiration and a fairly good voice.

In one of his laryngeal papilloma cases the growth had projected into the lumen of the glottis from the anterior commissure, and owing to the tolerance of the boy's larynx it had been possible to make frequent removals by the indirect method. A fibrosis had occurred around the base of the papilloma until a third of the cords had been embodied in it, and from this the papilloma still projected outward in a finger-like form. Dr. Jonathan Wright, who had had this case under observation in the first instance, had frequently expressed the opinion that when certain physiological changes occurred, that not only the papilloma but the fibrosis would disappear. Dr. Smith had wished to present the case before the Section on Laryngology of the New York Academy of Medicine when the fibrosis was at its maximum. He had requested the boy to come back to the clinic several weeks later with the intention of having a picture made of it before presentation to the Academy. To his surprise, upon the return of the boy about a month later, not only the papilloma had disappeared, but likewise the fibrosis, and from that time forward there had been no recurrence of either. This was a very marked demonstration of the statement made several years previously by Dr. Wright.

Unquestionably there are two varieties of papilloma in the larynx, those with little infectivity and those with great. In this latter group may be classed principally the multiple fibromata in children, and upon the removal of these growths the adjacent mucosa will frequently give rise to new growths particularly if it has been injured.

Dr. Smith said that it was his experience that tracheotomy, thereby giving rest to the larynx, was the surest method of eradicating these growths, but if the growths were removed and the bases of the mucosa from which they sprung had the fulgurating spark applied, that their recurrence was lessened both as regards time and number. He had several cases in which fulguration had proved effective but in others it apparently had not served any purpose further than the temporary removal of the growths. The main trouble had been in preventing the fulgurating spark short circuiting upon the laryngeal spatula, and also to obtain a dry surface in the larynx upon which to apply the sparks. Mucous glands and other lymphoid elements were so predominant in the laryngeal mucosa that it tended to disseminate the spark before it could burn sufficiently deep to produce any result. He believed that in addition to the application of fulguration that the local use of alcohol and the internal administration of *Thuja occidentalis* should be employed and that adverse criticism should not be directed towards fulguration as a means of obliterating these growths, because of the ineffectual attempts in some instances. A process which will so effectively remove skin warts and warts from the bladder must certainly be equally effective in the larynx, provided the spark can be concentrated upon a dry surface.

DR. GLEITSMANN said that the Section should be very grateful to Dr. Jackson for his very instructive demonstration and interesting remarks about the different conditions of stenosis observed and their treatment. Taking up the subject of laryngeal and tracheal stenosis, we can only admire Dr. Jackson who is cultivating and perfecting a third branch of our specialty. He first devoted himself to the treatment of laryngeal cancer and published valuable papers describing his method with card statistics of his results which by careful selection of cases for the proper operation were as good as or better than those by other. For valid reasons of his own he relinquished that field and began bronchoscopic work, in which he soon acquired international reputation and made valuable improvements,—all of which is of so recent a date that they are familiar to all.

Chronic stenosis and occlusion of the larynx or trachea are generally very difficult to relieve permanently. They can be treated by the internal and external methods. The former was already adopted and ingenious instruments devised decades ago by the late Dr. Herrman Schrotter. In this country it was improved and largely employed by Dr. Rogers, and our member, Dr. Delavan, spoke very favorably of it several times in this Section.

Occlusion of the larynx, severe cicatricial stenosis, necrotic affection of the cartilages, etc., require laryngostomy, of which Dr. Jackson gave a complete literature in *THE LARYNGOSCOPE*, 1909, and which became popularized, especially in France, by the indefatigable work and the numerous publications by Sargnon and his co-workers.

Without entering into the details of the operation and the indications when endo- or extra-laryngeal methods are preferable, he wished to make a remark about the history of laryngostomy which does not seem to be generally known. Although Gluck claims priority for the operation in the *Zeitschrift für Laryngologie*, 1909, and says he performed it ten

years ago without ever having been mentioned by Sargnon, the latter is considered by many its originator. But Sargnon himself, in his paper in the *Archives internationale de Laryngologie*, Vol. 24, No. 21, 1907, p. 338, gives Killian the credit of having performed the operation for the first time in the presence of French physicians.

DR. FRANK MILLER said that he had, at present, under his care a condition which this demonstration will help him to relieve, namely a tumor of the arytenoid, by which the arytenoid was displaced into the larynx. This was six years ago, and was relieved by a Stroetter's tube sharpened at each end by filing, or roughened at the side for use of every part of the glottis, especially for the removal of nodes and restoration of voice, for fibrominous masses, papilloma in the anterior portion of the larynx or toward the arytenoid and also for paralysis of the cords of any kind. In this way, voice had been restored, not to its full power, pitch and quality, in some 60 cases, without any apparent injury to the larynx. As he was more interested in the complete restoration of phonetic values of the vocal anatomy, he had evolved a certain theory on the correlation of light and sound, which showed that strenuous work, such as laryngostomy and intubation did not fill the bill, as the tissues for phonetic restoration were often destroyed by it. The theory of correlation was that the arytenoids were prisms set upon their bases and that the vocal chords were also prisms attached to the arytenoids with the base toward the thyroid, these adjusted to each other at the arytenoid end. In this way, double prismatic forces were at work for production of the momentum of sound, detonating it into the cavities and the sinuses above, analogous to light phenomena.

DR. EMIL MAYER said that he was very much impressed with Dr. Jackson's statements regarding the arytenoids and the care that should be taken with them. Recently he himself had read a paper before the American Laryngological Association and had called attention to the function of the arytenoids. In a certain case where the arytenoid had been fixed by a swallowed pin, the patient could not perform the act of deglutition. We have been accustomed to looking upon the epiglottis alone as a safeguard against foreign bodies entering into the larynx. His own experience had been limited to post-typhoid perichondritis, injuries, scleroma, etc. He had fortunately been able to take care of these patients by the intra-laryngeal method, and he would probably adhere to that so long as he was successful, a plan which Dr. Jackson would surely approve.

DR. W. SOHIER BRYANT said that he had listened with much interest to the paper and discussion. He said that the topic was a very broad one and that necessarily the discussion had to be more or less desultory, and he would make his remarks as short as the topics were long.

The subject comprises nearly the whole of otology as well as laryngology since it covers the etiology and treatment of all middle-ear diseases. If we are to do all we can to prevent middle-ear diseases and all we can to cure it after it has once begun, we will have to put the nose and naso-pharynx into perfect physiological condition. The gross anatomical defects are not so important as are some of the minor pathological conditions. Although a deviated septum may close one of the nares, it is

not necessarily of great importance to the hearing. The congestion of any part of the mucous membrane or any infection of the mucous membrane, or any change of the mucous membrane or erectile tissues which interfere with the circulation of air around the turbinates and in the middle and inferior fossae, has a very important bearing on the impairment of hearing.

Going more into detail, the contact of the middle and inferior turbinates especially of the lower turbinate with the outer wall of the nose is often a causative agent in middle-ear changes.

Considering the question of infections in detail, a limited infection in the region of the pharyngeal bursa can produce absorption enough to cause disastrous trophic changes in the middle-ear. Unfortunately these minor changes as a rule receive little attention compared to the care bestowed upon spurs and deflections which may or may not have a causative effect upon middle-ear deafness.

Dr. Bryant emphasized the importance of giving proper attention to these occult minor causes of middle-ear diseases in the prophylactic stages as well as in the most advanced condition.

DR. CHEVALIER JACKSON acknowledged the remarks of the Chairman in introducing him, and said that any merits that were attached to him lay in his ability to pick out a good man whose example to follow. The hour was getting late, but he would like to say a few words on the point brought up by Dr. MacKenty. Rest of the larynx following tracheotomy is certainly a factor in assuring recovery, though how much of a factor, it was impossible to say. The case of trichinosis reported by Dr. MacKenty was entirely unique, and he hoped that Dr. MacKenty would send him a detailed report to be kept with his other literature upon the subject.

The case of string cutting reported by Dr. Smith was also unique and brought to mind Abbe's work on the esophagus. The case got well as the result of treatment and it was remarkable, especially the endo-laryngeal method of putting the rubber tube through the mouth.

He expressed his interest in Dr. Miller's theory of tone-production, but did not feel competent to discuss the physiology of the voice or tone-production, as his own work had been chiefly along mechanical lines.

Dr. Gleitsmann had asked how to classify cases suitable for laryngostomy. Dr. Jackson said that he agreed with Dr. Mayer that in some instances the endo-laryngeal method will succeed and it should be tried first. In the worst of Dr. Jackson's cases, the endo-laryngeal method was first tried, and that failing, prolonged intubation was tried and it also failed. Then the John Rogers' and Schmiegelow intubation tubes with post-projecting through the fistula were tried and proved unsuccessful. Then, as a last resort, laryngostomy was tried and the condition was cured. Many of Dr. Jackson's cases had, however, been cured by each of the methods enumerated. Therefore he felt like urging the following plan: First try the endo-laryngeal operation, then prolonged intubation, then the method which Dr. Mayer recommends; but that failing, as a last resort we can get all of these cases cured with laryngostomy provided that too much of the thyroid and cricoid cartilages have not been lost by ulcerations of the mixed infections getting in and setting up

perichondritis and necrosis. It is possible that some of the cases may fall even under laryngostomy.

Dr. Jackson said that most of the credit for success in these cases was due not to his operative work but to Dr. Patterson's assistance and attention to the cases month in and month out until they were well. He had never seen anyone else with the patience to work untiringly with them until cured.

Laryngeal, Tracheal and Bronchial, Diphtheritic Stenosis, With the Pathology and Treatment of Chronic Stenosis of the Larynx Following Diphtheria. DR HENRY L. LYNNAH.

DISCUSSION.

Dr. EMIL MAYER said that most of the members could recall their experiences with the intubation tube in the days before there was an antitoxin. As he had not had occasion to intubate for diphtheria for twenty years, he did not feel himself in position to discuss the earlier part of Dr. Lynnah's paper. He was, however, much interested in Dr. Lynnah's remarks about the various chronic conditions we may be called upon to treat, and wished to emphasize the value of the recent addition to our armamentarium which makes this work so much easier for both the surgeon and the patient,—namely Killian's suspension laryngoscope. With this treatment, it is easy to so dilate a case of chronic stenosis of the larynx as to intubate very early. There is no other method which can be used with the same degree of safety. A year ago a little boy was admitted to the Mt. Sinai Hospital with a history of diphtheria and tracheotomy five and a half years before. The question was what was to be done for the stenosis. An attempt had been made to do a laryngostomy, but it had been a failure. The child then had a chronic stenosis as the result of the diphtheritic process plus the chronic stenosis following the surgical intervention. Dilatation had been practiced from below upward with various-sized probes. The child was placed under general anesthesia, and with suspension laryngoscopy it was possible to see just where the apparatus went in and was used. The uterine dilator was employed, followed by a rubber tube, its size increased until within a month's time an intubation tube was inserted, which the child is now wearing.

Dr. Mayer then asked how long Dr. Lynnah would leave the tube in position. Is it wise to let a child go home with its tube, or should it be kept under observation for fear of evil results. He said that he had very much enjoyed Dr. Lynnah's paper and the exhibition which he had presented.

Dr. SMITH said that at the last meeting of the section he had reported a case of a safety-pin embedded in the larynx of a child having remained *in situ* for thirty-seven days, during which time the child had received 3,000 units of antitoxin, several doses of ipecac and had had an intubation tube remain in the larynx forty-eight hours when it was coughed up. The diagnosis of the case had been that of diphtheria and treatment was directed towards this end, but as the hoarseness had remained the child had been sent to him for the removal of what had appeared to be papilloma of the larynx, by indirect examination.

Since hearing Dr. Lynah's paper Dr. Smith felt that the gentlemen having this child under consideration were not far wrong in their conclusions, since there was evidence of obstruction to breathing and no history of having inspired a foreign body, and that in view of the fact that laryngeal diphtheria is frequently present with its obstructive elements, though no evidence may be seen of it in the pharynx or nose, and even though a culture proves negative, the administration of antitoxin is certainly a thoroughly justifiable procedure. The amount of antitoxin Dr. Lynah advocated for a primary injection seemed most appalling to those unacquainted with such extreme measures. He understood Dr. Lynah got his best results from the injection of 30,000 units, while the majority of physicians coming in contact with fewer cases frequently feel that sufficient has been done when 5,000 units have been injected.

With regard to recurrent laryngeal stenosis following diphtheria he believed that while Dr. Lynah was unable to find any pathological changes in the nerve that the functioning properties of the recurrent laryngeal must surely have been affected. He had recently seen a lady with paralysis of the larynx who had had diphtheria in childhood. She had had no antitoxin and no intubation but one side of the larynx was completely paralyzed and therefore he believed that a sequela to diphtheria was frequently an involvement of the recurrent laryngeal nerve, which if it could be examined in some of the later stages of paralysis, some years subsequent to diphtheria, would show unquestionably histological and pathological changes.

Dr. JACKSON said that he was overwhelmed with the views of the pathological conditions presented by Dr. Lynah, and had never before seen such a series of specimens. He was especially interested in Dr. Lynah's demonstration of the fact that traumatism is sometimes done by the intubation tube, a new accident. Since seeing this demonstration Dr. Jackson was more than ever convinced that it was the mixed infection connected with the diphtheritic process as well as the necrosis which caused the damage to the larynx. Dr. Lynah had shown that traumatism can be done by intubation. If a false passage is possible, minor traumatism is, of course, possible and that offers an opportunity for the implantation of an acute infectious process. He had always thought that was not due to the intubation or tracheotomy but to the process itself. The features presented by Dr. Lynah were worth coming from Pittsburgh to hear and see.

Dr. LYNAB said that he had very little to add to what had been said in the discussion except in regard to the question of antitoxin raised by Dr. Smith. If you use antitoxin in the first hour of the disease, a very small dose is all that is necessary. This holds good especially in animal experimentation, but in the human beings we have quite a different proposition, for we seldom see these patients earlier than during the first twenty-four or forty hours of the disease. In 1906, I endeavored to isolate free toxin circulating in the blood of cases of the severe type which had received no antitoxin before admission and to figure out proportionately by the blood and body weight of the patient the exact amount of antitoxin indicated in a given case. No free toxin was found in the circulating blood nor was there any effect on any of the guinea pigs tested. This

proved conclusively that the firm union of the toxin with the cellular constituents of the body prevented its circulating whether it be large or small in amount. This started the administration of the very large or doses of antitoxin and he got much better results with the 30,000 unit doses than with several repeated doses of 3,000, 5,000 or 7,000 units. Furthermore, one dose only gives one reaction, and does not bother the patient as much as the frequently repeated small doses and is much less liable to produce anaphylactic shock.

Post-diphtheritic paralyses of the recurrent laryngeals Dr. Lynah thought were extremely rare. He had watched cases of neuritis with paralysis of the levators of the palate, in whom the voice was of a decided nasal twang, but the vocal cords would show no sign of any involvement or fixation.

He had also seen cases with apparent paralysis, in the laryngeal types of diphtheria, but when the larynx was examined the supposed paralyses were found to be due to infiltrations.

He thought the late paralyses referred to by Dr. Smith which were unilateral were in all probability due to ankylosis of the arytenoid cartilage. He could not say why these paralyses did not occur, but it was exceedingly rare to have involvement of the voice unless the patient had had laryngeal involvement or had been intubated.

Regular Meeting, October 22, 1913.

Epithelioma of Larynx. DR. T. R. CHAMBERS.

On September 29, a man, aged, 66, entered my office and said he had been in attendance once a week for two months at a clinic in New York, and that Dr. S. had ordered medicine and a gargle (?) which he had faithfully used and that the doctor said his throat at each visit was about the same.

On examination, I found a smooth, globular tumor of the larynx encircling the left half of the epiglottis. I was deceived by finger-touch which seemed to confirm my diagnosis of abscess. He assured me its history was not a minute longer than two months. Externally, there seemed to be a thickening opposite the tumor. In this I was also deceived. At least at autopsy no tumor was found here external to the larynx. Having made up my mind it was abscess, I decided to let out the pus, and dreading a possible sudden death if the incision should be made in the larynx-side I pushed a knife into the mass just external to the epiglottis. Firm resistance was met and only blood followed the withdrawal of the knife. The tumor was evidently malignant, probably epithelioma.

He returned to his business and came the next day when arrangements were made with Dr. Yankauer in the hope that a hemi-laryngectomy might be done. It was almost unbelievable that with a larynx distorted as this was his speech should be only a little thick and husky and audible. The tumor left but a very narrow crescent of space for breathing and

voice. The space between the hyoid and the tip of the superior cornua of the larynx on one side was but 5 cm. while the opposite side had triple that distance. He left my office to return to his work but while at table in a restaurant suddenly died. Dr. G. W. King, County physician, kindly obtained the larynx and it is presented as a unique specimen. The tumor extends to the second ring of the trachea and invades the esophagus. An operation could only have had a fatal issue, probably on the operating table. Dr. G. E. McLaughlin's report is "Fibrous tissue stroma which encloses numerous alveoli made up of squamous epithelial cells with large round nuclei forming in places pearls. There is also a moderate amount of small round cell infiltration."

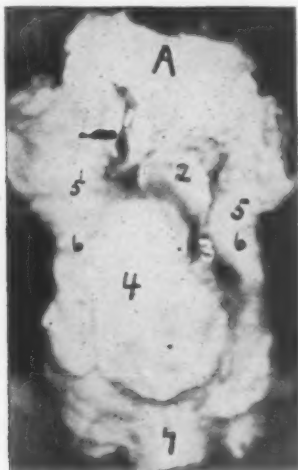


Figure 1. (Enlarged $2\frac{1}{4}$ times.) A. Base of tongue. 1. Cut for microscopic specimen. 2. Epiglottis. 3. Crescent breathing space. 4. Tumor. 5. Hyoid bone. 6. Supra-cornua thyroid. 7. Esophagus.

The case presents four remarkable features: (1) That a tumor in this region could attain such immense size 6.5 cm., 3.5 cm., 2 cm. (2) Rapidity of its growth, there being only two months' symptoms. (3) The wonderful tolerance shown. He was at his work, as clerk, daily. The voice was due to the fact that there was no involvement of the cords. Breathing was limited to a very narrow crescent of space. No dysphagia was complained of, although the esophagus was involved. (4) Absence of pain.

DISCUSSION.

DR. FRIESNER recalled a case which occurred in the practice of Dr. Sharp and which was practically identical with this one. He drew a diagram on the board showing the position of the tumor in the larynx. The laryngoscopic picture of Dr. Chambers' case must have been precisely like that which Dr. Friesner mentioned.

Case of Status Lymphaticus With Skiagraph. DR. JOHN E. MACKENTY.

The interesting part of this case is before you. On October 14, the patient came to my clinic with a cleft palate. The child was about 1½ years old, the only child of a mother of over 40 years, and was apparently strong and healthy, light complexioned, with rosy cheeks, but had very little hair. The next morning at 8 o'clock it was etherized and I did the operation; time of operation three-quarters of an hour. The child was in good condition until about 2 p. m., when it began to cry, and at 3 p. m. it was noticed that the child was pale and breathing fast, and in fifteen minutes it was dead. The only thing I could think of as the cause of death was status lymphaticus. We took the body of the child into the x-ray room and had this picture taken. As you see, it shows an enormous thymus. I believe that in all cases where there is physical deformity, such as cleft palate, it would be well to have the child x-rayed for enlarged thymus. It may be that such cases are more likely to have ductless gland affections than normal children. The stereoscope shows the roundness and extent of the growth to be very well. It was very large, coming down to the diaphragm.

DISCUSSION.

DR. LAW said that the skiagraph presented an unusually clear outline of the thymus for the reason that the plate was made a few minutes after death; consequently the tissues were still soft and there was absolutely no movement to the gland or surrounding structures. The entire outline of the thymus could be followed, running from the clavicle downward on both sides of the sternum, and forming a cap over the heart. The apex of the heart was displaced downward and to the left. The plates being stereoscopic afforded an excellent view of the condition.

DR. JOACHIM told of a case which had a sad personal element in it as it concerned the child of a confrere, which died of thymus at the age of 3 years. The child was never sick for a moment but just dropped over dead. A post-mortem was made and it proved to be a thymus case. These conditions are probably not so rare as we may think, and we should be more on the lookout for them.

Perforation of the Nose Due to Erysipelas Following Traumatism. DR. J. H. GUNTZER.

DISCUSSION.

DR. MACKENTY: The result of this case is good, and Dr. Guntzer is to be congratulated. The flap taken from the brow left a large denuded area which has closed over with practically no deformity.

DR. CARTER said that he had seen the case before operation and that it was one of the most hideously deformed faces he had ever seen. There was a very large opening back into the nose, and it certainly required a great deal of skill to close it up. He had also seen the patient since the operation, and the photograph did not do full justice to the excellent result obtained.

DR. HURD told of a case he had treated a number of years before in which the patient had a crowbar blown through the side of his nose, leaving a big hole over an inch in diameter. A flap was taken from the forehead and the edges of the opening were brought together; the result was an excellent scar which could scarcely be seen. The flaps were sev-

ered in ten days, the wound sewed up in the forehead, and the pedicle cut off. The man made a good recovery, in spite of the fact that at the time of the operation he was syphilitic with necrotic bone in the nasal cavity and had been on mercury treatment for six months. He had primary union and a good healing.

Cases of Nasal Deformity Corrected by Transplantation of Bone. DR. W. W. CARTER.

The object in presenting these cases was not to show the number that had been corrected but rather to call attention to the results of the bone transplantation, and particularly to the condition of the bone in the nose at the present time, so that the members might have an opportunity to judge for themselves what occurs to bone when it has been transplanted in such cases. It was unnecessary to call attention to the operation, for he had shown it before, but in order to refresh their memories so that the men might fully understand the conditions at the present time he drew a diagram on the board illustrating the operation. For the transplantation, a piece of the ninth rib was used, and was shaped to fit the case. There was not in this case a sufficient amount of the bony framework left to support the noses, so they were not suitable for the bridge-splint operation. A curvilinear incision was made from the inner extremity of one eye-brow to the other, down to the periosteum but not through it. This flap was then raised with a tenaculum, and a transverse incision was made through the periosteum, which was then elevated three-eighths of an inch. A sharp dissection was then made down over the bridge of the nose, and the skin and subcutaneous tissue elevated to a variable extent, depending upon the deformity. Sometimes the tissue even over the cheek has to be elevated. The lower end of the bone graft is passed down nearly to the tip of the nose and the upper end is anchored under the periosteum over the frontal bone. Only the outer half of this rib is used and the cancellous tissue is scraped away with a curette. The incision is closed with horse hair or very fine silk. If everything goes well the wound is completely healed in ten days.

Dr. Carter said that he had had radiographs made from three years ago to the present time. In these cases the bone was transplanted into the soft tissue, and therefore, they are of considerable value, for most of the bone transplantation hitherto had been into the long bones. The transplantation of the bone into the soft tissues is a very different proposition from transplanting it into its own environment as in filling in defects in long bones. He had intended to show six cases thus treated, but only five of them had appeared. Plates were passed around, so that the members could see more closely what was occurring in the bone.

Case 1: This was a case in which bone not covered by periosteum was transplanted and a radiograph taken two months after the operation. It showed no absorption of the bone. The case was especially interesting in that the deformity followed a submucous operation. The patient had a slight injury to his nose, but the deformity would hardly have followed had it not been for the weakening effect of the submucous operation. He had a very pronounced depressed deformity. Another radiograph was taken eighteen months after the transplantation. In this where the bone joins the frontal bone there is a growth of bone extending down on the

graft; growth begins again where the bone comes in contact with the nasal bones. There has been a considerable growth of bone below the contact with the nasal bone, so that the lower end is much larger than the upper end. This case demonstrates clearly the result of transplanting bone without periosteum.

Case 2: A radiogram of this case was shown. The man was injured three years ago, and operated two and a half years ago—bone-transplantation without periosteum. The first plate was taken twenty-one months after operation; the second, two years and four months after the operation. The bone was not absorbed but has been growing. In this case the piece of bone slipped out of its position, so that it only rests lightly on the nasal bones, but the graft seems to be larger at that point. The result is a very well-shaped nose. The bone-graft can be moved about. Here we have a periosteum-free bone-transplantation, practical free in the soft tissues, where it has been for over two years. It not only has not absorbed but it is distinctly larger than it was seven months ago. There is a little line of rarefaction running down the center of the transplant, giving one the impression that there is some absorption going on in the center of the original transplant. In this case the bone without periosteum was acting in an osteo-inductive capacity.

Case 3: This was one of the most interesting and instructive cases which the doctor has had. The patient had no bridge whatever, it being a congenial deformity. The bone was transplanted with the periosteum twenty months ago and the results could be compared with the cases in which there was no periosteum. The first plate was made fifteen months after operation; this shows firm union to frontal bone and considerable growth of the graft. The second plate, taken twenty months after the operation, shows much greater growth of the bone and a slight trace of rarefaction in the center of the graft, which was also noticed in the first plate.

Case 4: This patient had an accident about a month and a half ago. His nose was broken and a very peculiar deformity resulted. There was a dropping down of the cartilaginous portion of the dorsum, and the septum was bare and sticking out of the wound for three-eighths of an inch. In this case, instead of making a semilunar incision, that portion of the septum which protruded was resected and the bone was introduced through this longitudinal incision. This case was operated upon only eighteen days ago and the picture shows how the case is progressing. There was no reaction whatever, and it is perfectly well, as can be seen, though the bone is not yet in bony union with the frontal bone or nasal bones. The man has a good nose, and he had a wretched one when he first appeared at Gouverneur Hospital.

This is a case in which there was some infection of the bone at the time of operation. Nine months later every bit of the bone was absorbed. There was considerable pus for a time but it was controlled. This was one of those pier operations, that is in addition to putting in a dorsal piece of bone two piers were put in to support it. The pier shows very distinctly in the picture. In the next radiograph there is no bone left; it has all been absorbed.

These cases are presented purely for the purpose of demonstrating what occurs to the bone when transplanted into the nose. It is the first

Instance when the bone was used without periosteum and anchored over the naso-frontal process in contact with the nasal bones; the bone has not been absorbed, but is evidently growing especially from the points where it comes in contact with living bone and periosteum. In every one of these transplants there is an area of rarefaction, as if the original transplant were being absorbed. In the case where the bone was transferred with the periosteum, the bone is heavier and stronger, and evidently is growing rapidly larger.

Dr. Carter said that he could not accept the views of McEwen, for he felt that his cases which were operated before McEwen's book was written show that the bone has an osteo-inductive, osteo-conductive and osteo-genetic function, and that osteo-genesis is quickly assisted by the periosteum, and that if the periosteum is included with the graft it is more apt to be successful and will grow better.

DISCUSSION.

Dr. GLEASON said that he had never done any work of this kind, but had made some injections of paraffin with very satisfactory results. He said that he was greatly impressed with the results obtained by Dr. Carter, and had remarked to one of the gentlemen present that he would like to have as straight a nose as these patients. Dr. Carter had demonstrated this work the evening before at the Philadelphia Laryngological Society and all the members were greatly impressed with the results of his method of procedure.

Dr. GODDARD confirmed what Dr. Gleason had said, and expressed the hope that some of this work would be done in Philadelphia.

Dr. HAYS said that he thought that all the members were pleased to have this demonstration of Dr. Carter's work shown them after a lapse of two or three years. There could not be a better demonstration of what he has done in these cases. He remembered that at that time there was a good deal of skepticism, which was further felt when Dr. Murphy, of Chicago, stated at the last meeting of the Congress of Surgeons of America, that these transplants would never stay in. Dr. Hays said that he had treated three cases by this method, the results in the first one being excellent, but the other two not so good. The reason for the failure as far as the cosmetic result is concerned can best be explained by means of diagrams. If the deformity is congenital or due, as in one of my cases, to pressure by forceps during birth, the line of the forehead and the chin extend out beyond the line of the nose; if so the nose is sunken in the center of the face. In such a case it is impossible to get a rib which will bring out the line of the nose without causing considerable stretching of the skin, or else causing a further curvature of the rib because of the tension on the skin. Sometimes the rib will have a curve from before backwards and upward towards the spine, besides having a convexity outward. In such a case if a large portion of the rib is needed it will be impossible to get a piece which will not have a tendency to cause the nose to be tilted to one side. This happened in his second case.

The demonstration of x-ray plates by Dr. Carter gives us an indication of the position that the rib assumes in its new place, and makes us have more confidence in the results of the transplants.

Dr. CARTER, in closing the discussion, said that the object in anchoring the bone under the periosteum over the naso-frontal process was not to

secure osteo-genesis, for the so-called periosteum over the bones of the skull is not an osteo-genetic membrane. Any osteo-genesis obtained is from the frontal bone or the periosteum on the transplant itself, not from the periosteum over the frontal bone. He had examined a number of skulls and through the courtesy of Dr. Gleason had studied some of those in the College of Physicians in Philadelphia, among them some which had been trepaned for many years, the patients living for a long while afterward—and there was no growth of bone over the opening in the skull. In these congenitally deformed cases, as in the negro boy just shown, the operation should not be done all at once as the skin would be stretched too tightly. This boy had been told that there would be another operation later, as it was necessary first to have a firm bone basis on which to build.

As for having a curved piece of bone, it needs to be curved in an antero-posterior direction. You do not want to transplant it on the edge. It can be cut straight, but have a curve in the antero-posterior direction, and the slight curve forward is an advantage as in the normal nose.

The cases presented are of considerable value for they are of long standing and they demonstrate some of the results of bone-transplantation; they are presented in order to show what actually happens. It is a case of bringing the goods and showing them. If a bone is not osteo-genetic, it is at least osteo-inductive.

The Indications for the Gleason Operation for the Correction of Deviations of the Nasal Septum. DR. E. B. GLEASON.

Published in full in this issue of The Laryngoscope, page 1129.

DISCUSSION.

DR. GODDARD said that he had not expected to be called upon to open the discussion, for he had wanted to hear the men of the Section speak of their experiences with the Gleason operation. It had been his good fortune to assist Dr. Gleason in a number of these operations, several on children, and in each instance the result has been very good. In the younger children it would seem to be the operation of choice, for it is quickly done and the results are very satisfactory. Of course, as Dr. Gleason had brought out, in deviation high up the submucous seems to be the operation of choice. Only the other day a youngster had come in with a marked deviation, and it required a great deal of strength to break up and remove the resiliency, but the result was good. The operation is so quickly done and the results are so satisfactory that the men in Philadelphia use it a great deal in preference to the submucous operation, particularly in the younger cases.

DR. JOACHIM said that in addition to the indications which Dr. Gleason had given for the operation there was one in which he himself preferred the Gleason operation to any other, viz., in cases where the inferior turbinate had been removed, creating an enormous cavity on the other side, whence the obstruction had been removed. In these cases his idea was to save as much material and tissue as possible and not to waste any more than had already been wasted, and for that reason he preferred the Gleason operation. It gives an absolutely good result, it restores the equilibrium, and the result is far better than any other operation could give under such conditions.

Dr. HURD said that he hardly felt qualified to discuss the paper as he had long considered the submucous operation to be the operation of choice. Dr. Joachim had pointed out the advantages of the Gleason operation in unilateral atrophic cases wherein the desire is to fill in the atrophic nares. The Gleason or the Asch operation was indicated and a submucous resection contra-indicated. I try to balance up the nose in that way. It is a very good operation. The Gleason operation is certainly simpler than the submucous, but unfortunately the indications for its employment are very limited; there has to be a small area of deviation to encompass it. (Dr. Hurd here drew a diagram and described several conditions in which it would be ineffective.)

The younger men in New York are all doing the submucous operation, hundreds of them every year, and have very good results. It can easily be done after a little experience and can be performed in a reasonable length of time—ten or fifteen minutes. Dr. Hurd said that he had done the operation on a series of twelve children, the youngest being six years old and had observed these children every six months since, some of them for seven or eight years, and there was no injurious effects on the nose. When the nose fell, it was usually the result of poor technic. Dr. Gleason's operation would certainly avert these cases of depressed nose.

Then the curved-in deviation will still remain, although you put the deviated portion into the other side; it is not obliterated, and there is always a cupping in. The point is that if you did not break up the resiliency absolutely the deflection will return. It never failed that they must smash up, no matter whether you did the Gleason operation or any other. The submucous seems to be the easier way, with less resection than the old-fashioned crushing operation.

Dr. BEEMAN DOUGLAS said that he, too, belonged to the good old period of septum work, those days when all fought over the various operations which each had devised. He, himself, had devised a septum operation which, like Dr. Gleason's had considerable vogue for some time. From this it could be seen that what he was about to say had no sting in it to the guest of the evening, but that he simply expressed his frank conviction that any attempt to revive any interest in any septum operation which was practiced before the submucous resection had been generally accepted would be about as effective as the attempt to awaken an interest in the re-introduction of stage coaches in these days of automobiles and aeroplanes.

Dr. DELAVAN called attention to the methods of the late Dr. Asch, which were the originals upon which the subsequent so-called "modifications" had been based, and which possessed so many valuable features. It seemed to him that Dr. MacKenty had summed up the matter admirably and that the points which he made might be subscribed to without much question. In his own opinion, operations for the relief of deformed septa might be divided into two classes, those in which for existing mechanical reasons the submucous operation was indicated, and those in which some other operation was preferable, in which the bony and cartilaginous framework of the nose was as far as possible preserved. The same principles of conservatism which applied in certain other surgical situations should be observed here. A properly balanced "setting up" operation would often succeed in relieving the nasal obstruction and in correcting deformity

without permanently weakening the nasal structure, as in extensive resection, and in suitable cases was therefore to be preferred. The simile of likening the two forms of operation with the aeroplane and the antiquated stage coach was more apt, possibly, than the speaker had intended. We need to know more about resection and the aeroplane before we can speak with positive certainty of the final value of either. The method by replacement is the better for children in whom the septum is not yet fully developed. Without question the submucous operation, valuable as we all know it to be, has been largely overdone. The Section was indebted to Dr. Gleason for again directing attention to that fact.

DR. JOHN E. MACKENTY expressed his pleasure in hearing Dr. Gleason's paper. He had known of the Doctor's work for many years and had performed his operation a few times. In the present tendency to do the submucous operation on every septal deformity we seem to have overlooked a simple method more applicable in some cases. In atrophic cases it is indicated over and above the submucous operation. One remark which Dr. Gleason made seems very important, that is the over-enlargement of the space by the submucous. In some cases the patient comes back with an enormous space and has a dry nose. We have neglected that problem in our work and have not always kept in mind that too large a nasal space is worse than one too small. In trophic cases, as Dr. Gleason has indicated, and in children, anything that will remove the deformity without injuring the septum is the best. We often see children with extreme anterior deformities. That type is extremely hard to relieve by any method and a complete submucous is contra-indicated. In such some plastic method should be adopted.

He thanked Dr. Gleason for the suggestion made in the paper, which may result in giving an impetus to do the Gleason operation instead of the submucous one in suitable cases.

DR. CHAMBERS said that he had seen Dr. Gleason do two of these operations in his office in Philadelphia, each of them occupying less than five minutes. Dr. Hurd says ten or fifteen minutes is a *long time* to take for the submucous operation. I should like to see him do his rapid work.

DR. WILSON said that he also would like to testify to the admirable work done by Dr. Gleason. There seems to be still a place for this operation, and he wished to express his thanks to Dr. Gleason for coming over from Philadelphia and refreshing the memory in regard to it.

DR. ABRAHAM said that when he first began this work the Asch operation was still in vogue. He had had the pleasure of working with Dr. Asch and naturally favored that operation, but a little later he used the Gleason method and was very favorably impressed with it, employing it on a number of cases. Then came the submucous operation which he adopted and has been practicing ever since. The Gleason operation is no doubt better adapted to some conditions, and the discussion of the evening probably will revive its use in appropriate cases.

DR. T. W. CORWIN said that after having done the Asch operation for a while he had adopted the Gleason method and had been very well pleased with the results, and thought at that time that no better operation had been devised. There was very little discomfort to the patient

and very good results. Since the submucous operation had come he had been following that procedure and had not used the Gleason operation much, though he recalled some cases in which no better results could have been secured. He was inclined, however, to think that in the majority of the cases which show deflection, the nasal fossa as a whole is undeveloped, and the septum presents curves and thickenings as the result of developing in too narrow quarters. It is too large for an undergrown nasal fossa, and it causes obstruction to respiration. Any operation that tends to reduce its bulk as well as its deviations will aid respiration.

Dr. STROUSE said that any operation which corrects one deformity and produces another is not surgically correct. The submucous operation as it is performed in ninety-nine cases out of a hundred by removing as much of the septum as possible should be discouraged and an operation that will limit itself to the deformity only, should be encouraged as the correct surgical procedure. If a submucous operation is done and only so much is removed as to correct the deformity, we are doing all that is required. If we have a deformed limb we do not remove the whole bone, but simply the deformity, and if we apply that principle in the nose we will do well. All these displacements and crushing operations cannot straighten the septum; they correct one deformity and invariably produce another. The operation of the future is that one which is limited to removal of the deformity only.

Dr. GLEASON agreed with those who had discussed the paper that the submucous operation was the operation of choice in most cases. Where the operator is skillful and meets with no accidents in the majority of cases one could not ask for better results than can be obtained with that operation. There are, however, undoubtedly cases where the Gleason operation would be better than the submucous one.

Dr. Hurd had said that this operation applies only to deviations in the anterior part of the septum, while as a matter of fact the further back they are the easier it is to reduce the resiliency. Dr. Gleason said that he would not hesitate to do the operation in a case involving two-thirds of the septum, and he had rarely seen one involving more than that. It has been stated that involvement of the entire septum never occurs. He had seen a case in which the deviation involved even the posterior edge of the septum, but these cases are extremely rare. However, if there is a deflection of the upper portion of the septum of course the operation is contra-indicated. He said that he had operated in horizontally-shaped deflections and fractured the bones of the positive deviation with forceps or his finger.

As for the statement of Dr. Voislavsky. Soon after the operation thickening appears at the base of the septum caused by the overlapping of the flap. One of two things will correct the deformity. Either this thickening will be absorbed, so that you will have in some cases a septum that would not be straighter if you had laid down a plumb line, or it is a very simple thing, after the parts have healed, to remove any redundant thickening at the base of the septum with a saw.

PHILADELPHIA LARYNGOLOGICAL SOCIETY.

Regular Meeting, March 18, 1913.

DR. ROSS HALL SKILLERN, CHAIRMAN.

New Instrument for the Treatment of Suppuration of the Antrum of Highmore. Exhibited by DR. E. B. GLEASON.

The instrument shown this evening is for the production and maintenance of a comparatively large opening from the maxillary antrum into the nose beneath the inferior turbinated body, for the treatment of chronic suppuration. It was devised after considerable experience in the treatment of antral suppuration with Wells' trocar and rasp canula.

The instrument is a double-ended trocar, with one end of the probe pointed, the other triangular sharp point. Both ends are slightly curved at the tip end of the diameter of No. 18 of the French catheter scale. On the concave surface for a distance of one and three-fourths inches is a coarse file or rasp so constructed as to cut on the pull. The instrument is designed for the treatment of chronic suppuration only, as acute suppuration unless caused by gangrenous tooth pulps or some other neighboring forms of infection quickly subsides by treatment addressed to the region of the maxillary ostium or a few irrigations of the antrum through a Lichtwitz needle.

Diseased Conditions of the Ethmoidal Region. DR. FRANK EMBERY.

When I say diseased conditions here I mean the word in its broadest sense. I mean it to include adhesive, hypertrophied tissues especially. It has been my experience that a considerable amount of nasal discomfort is due to pressure in this region as well as stenosis of the fronto-nasal duct, the result of hypertrophied tissue and adhesions. We have in the region under consideration the following structures: (1.) Anterior end of the middle turbinate; (2) anterior ethmoidal cells; (3) bulla ethmoidalis; (4) uncinate process; (5) The outlet fronto-nasal duct.

I have frequently seen the anterior end of the middle turbinate so hypertrophied that it completely filled the space between the septum and outer wall of the nose and be in firm contact with both walls, even after applications of cocain and adrenalin. I have seen the bulla-ethmoidalis so large as to force the middle turbinate hard against the septum. The anterior ethmoid cells are frequently enlarged and in contact with the septum. Adhesions between these cells and the septum are not infrequent. Such being the case, you can readily understand how the least irritation and congestion will cause distress, varying from a simple discomfort to intolerable headaches. These headaches are sometimes very intense and give the sensation of a band around the head. Neurasthenia and asthenopia are frequent results. The uncinate process may be overdeveloped and with a moderate enlargement of the middle turbinate or

the bulla-ethmoidalis, cause a partial or complete stenosis of the fronto-nasal duct, interfering greatly with the drainage and ventilation of the frontal sinus. These conditions we have all seen probably on many occasions. Of course under such conditions we can only hope for relief by operative procedure.

I have never seen any satisfactory results from chromic acid or other escharotics. We will now take up the various operations.

First the hypertrophied middle turbinate. When the middle turbinate is so much enlarged as to completely fill the space between the septum and outer wall of the nose, it is impossible at least to me to satisfactorily use an instrument like a biting forceps or scissors to make the initial cut in which to place the snare, because when such an instrument is opened there is no room between the turbinate and nasal walls for the blades of the instrument. If you force the blades between the enlarged turbinate and nasal walls you push the ends of the blades into the walls on either side. In 1910 Lentz made for me this chisel. It has a narrow cutting end. It is concaved with concavity looking downward. The end is slightly notched to keep it from slipping and the extremity is slightly curved so that it makes a horizontal cut instead of cutting upward. The notched end is placed so as to embrace the turbinate just at its attachment to the ethmoid. Firm pressure with the fingers engages the cutting edge and a few gentle taps of the mallet (I always use a lead mallet because there is no recoil) sends the instrument into the bone. When you have made the horizontal cut far enough back you gradually elevate the handle, which depresses the cutting edge, and as you gently tap with the mallet you cut downward. You can now by using a little pressure with your fingers force the portion which has been almost detached down into the nostril where there is more space and you can easily place the loop of the snare around as much as you wish to remove and quickly detach it. I have used this chisel many times and it has never failed to do its work. This same chisel can be used to break into the ethmoidal bulla and a cutting forceps will satisfactorily do the work.

For the anterior ethmoid cells I frequently use this rasp. This instrument was made at the same time as the middle turbinate chisel. The extremity is curved. The cutting portion is triangular and has teeth on the two lateral surfaces. It is made only to cut on the draw. This rasp is only used to open these cells and a cutting forceps is used to finish. (I use this rasp instead of the previous chisel because I feel safer in doing so.)

To enlarge the fronto-nasal duct in case of stenosis, I first endeavor to pass a fine applicator properly curved and wrapped firmly with a small amount of cotton, dipped in a 20 per cent solution of cocaine and a little adrenalin. As a rule it is necessary to remove the anterior end of the middle turbinate. When I had been able to pass this cotton-tipped applicator into, or almost to the frontal sinus bone I commence with the smallest Sullivan rasp. I then irritate the sinus with a warm normal salt solution. For irrigating the frontal sinus I have found an ordinary silver Eustachian catheter properly curved to be very satisfactory. I

have a tip of a two-ounce matchless syringe made to fit the catheter. I have found this method very satisfactory and neat. I usually finish by injecting about 1 drachm of a 10 per cent solution of argyrol.

DISCUSSIONS.

A. H. C. ROWLAND: I have found that the rasp has certain advantages in the anterior ethmoid region, although I have frequently been able to maintain good drainage with spray of cocain and adrenalin. Diseases of the vicious circle often date back to diseases of childhood. The infraction of the middle turbinate will often establish a good drainage and ventilation. If this is not accomplished by this method, then I remove the anterior third of the middle turbinate with snare and scissors.

DR. GEO. W. MACKENZIE: Dr. Embury spoke of the middle turbinate region of hyperplastic tissue, and did not speak of something which I consider more important. One of the common causes of asthenopia and headaches is hyperplasia with cysts or scrolls of the middle turbinate. The middle turbinate may be pressed so firmly between the septum and lateral wall that it is often impossible to snare, even after shrinking with a 20 per cent solution of cocain. In such a case Hajek's hook should be employed, after use of which the turbinate will collapse—the snare or scissors may then be employed to remove the anterior third. Cysts are usually thought to contain pus, but in the large number which I have removed during the past eight or ten years I have not found pus. We can never be too radical in operating in this region.

DR. E. B. GLEASON: Dr. Gleason uses Farnum's alligator forceps in removing the anterior portion of the middle turbinate, also snare and curved scissors, and has used the Ballenger knives on the cadaver, but never on the living.

Treatment of Secondary Hemorrhage Following Operations on the Nose and Throat. DR. P. S. STOUT.

Secondary hemorrhage following operations on the nose and throat are by no means of rare occurrence. One operator at the last meeting of the American Medical Association reported fifty cases of fatal hemorrhage. Just how many of these were secondary hemorrhage I do not know.

I will first speak of the nose, and then of the tonsils and adenoids. In the beginning, I wish to state that I have drawn freely from such writers as Ballenger, Phillips, Gleason, Smith, Piersol and Packard. Secondary hemorrhage following nose operations may be looked for at any time, whether the operation is slight or of an extensive character. If no packing was used after the operation, as is now frequently practiced and blood oozes from around the clot, it is best to wash out the nostril thoroughly and then inject hot water, temperature around 130° F. or ice water, being careful, however, not to use too large a quantity. After the nostril is clear of blood, look quickly for any bleeding point. If you discover one, apply adrenalin solution, peroxid of hydrogen, or solution of tannic and gallic acid. If bleeding still continues, then some form of packing should be used. Berney Simpson splints or narrow pieces of

gauze packed in both nostrils usually will suffice. However, sometimes even after this bleeding still continues. It then becomes necessary to remove the packing, and pack the posterior nares by means of Bellocq canula, and further support this by packing the anterior nares. These tampons should not remain *in situ* more than twenty-four hours. If bleeding still continues horse serum injections should be used, as the probabilities are you are dealing with a hemophiliac.

DR. STOUT discussed hemorrhage following the removal of adenoids and tonsils and the value of thrombokinase in the control of persistent oozing following tonsil operations and as a final resort, the tying of the external carotid.

DISCUSSION.

DR. GEO. H. COATES: Hemophilia is a rare disease, and the ordinary cases of oozing and secondary hemorrhages that we get are not true hemophilia but the result of delayed clotting. I think that if the clotting time is delayed over seven minutes there is more or less hemorrhage. I had a case at the Pennsylvania Hospital a few days ago, a young girl, on whom I performed a tonsillectomy, the hemorrhage lasting from two to three days. This was a case of true hemophilia. The history showed that a number in the family had been bleeders. Animal serum which was used in this case saved her life. Regarding the use of thrombokinase, you must have a fresh supply on hand, as it only keeps a week. In tonsillar hemorrhage, if uncontrolled by pressure, then one can suture the pillars and use the perforated shot.

DR. ROSS HALL SKILLERN reported a primary hemorrhage in a case of tonsillectomy, in a girl of 18 years, under ether narcosis. The hemorrhage was controlled by clamping and suturing.

DR. E. B. GLEASON: Dr. Gleason spoke of controlling hemorrhages from the septum by the use of Simpson's cotton splints, or cotton wound around an applicator, and then saturated with peroxid of hydrogen wedged into the nares, and in tonsil hemorrhage, digital pressure with two or three small sponges, removing one after the other to find the seat of hemorrhage.

DR. WM. A. HITSCHLER believes that the majority of accidents, especially in tonsil operations are due to the fact that there is a failure to treat them as hospital cases; they are operated at the office under local anesthesia; they are not put at rest, or under strict regime. He has his patients lie on their faces so that a slight hemorrhage may be detected by the staining of the pillow.

DR. GEO. W. MACKENZIE: I have been doing operative work on the nose for a number of years, but cannot recall a single bad hemorrhage. I keep the patient quiet in the office for a period long enough to have the effects of the cocaine and adrenalin wear off (two to three hours), and in that time if there is to be any hemorrhage it will be detected. I do not see why we should fear hemorrhages in the nose, as pressure on the bleeding point will stop any hemorrhage. In case of septum operations or spur operations, we sometimes have difficulty in finding the bleeding point. I use gauze instead of cotton, as the splints

will often soften up and you do not get the pressure on the spot as you will from gauze. In tonsil hemorrhage, if it is persistent, I advise suturing, and caution against tonsil clamps, as necrosis may follow their use.

Report of a Case of Thiosinamine Poisoning. DR. WM. A. HITSCHLER.

Otologists everywhere will welcome any remedy which proves of value in otosclerosis or the various chronic adhesive processes of the middle ear. The futility of our efforts along this line is duly and properly recognized by otologists themselves. With respect to the chronic adhesive processes, while we may say, in all truth, that the fault lies rather with those concerned in the recognition and treatment of the cases in their early stages, i. e., the acute catarrhs and suppurations, nevertheless it would be a boon to many unfortunate sufferers from tinnitus and deafness could we rectify the damage done by even unintentional neglect.

Of the classical remedies employed, classical only because of their time-honored employment and not because of their efficiency, none has ever inspired much enthusiasm or hope, due regard being given to the exceptions to all rules. It is therefore a matter of no surprise that a new remedy is welcomed.

Some years ago thiosinamine was highly recommended as an agent for the absorption of scar tissue. Tousey states that thiosinamine has positive curative properties in causing resolution of benign and malignant tumors and the absorption of cicatricial tissue, it acts specifically upon certain abnormal tissues, causing their absorption or conversion into normal tissues, is of great value in the removal of cicatricial contractions following lupus or any other cause of loss of substance, contractions from burns, corneal opacities and keloid yield to its action. I have been using thiosinamine in diseases of the middle ear since 1907. At first I used it internally only, and later combined the internal administration with the local injection into the middle ear by way of the Eustachian tube. Whether it has been of any real value or not I am not prepared to say. Some cases have shown improvement after other methods had failed, some have shown no change, while others have grown worse. Naturally the effect of local treatment, e. g., inflation, etc., can never be separated from the general results in the cases in which I have tried it, since I have always combined the local treatment with the administration of the drug. It is, however, concerning its toxicity that I wish to call your attention. The earlier observers declared it to be practically harmless. Later, Hayn and Clifford reported cases of poisoning with the following symptoms: violent vomiting, nausea, rigors, cardiac weakness, rapid pulse and fever. Unusual symptoms were apathy, headache, muscular prostration and a purpuric rash in the skin and mucous membranes. In one of my cases, increased cardiac action was noted which disappeared upon the withdrawal of the drug, reappeared upon its repeated administration, and again disappeared upon its withdrawal. Another case I would report more in detail. The patient was a dentist, age 50, in excellent physical condition. Diagnosis, otosclerosis and chronic adhesive processes with some obstruction to the Eustachian tube. The tinnitus was of six or eight years' duration, the deafness ten

years. No paracasis Willis! The usual methods were employed, such as injection *per tubam* of pilocarpin, vaseline, etc., and the passage of the bougie. But slight improvement resulted. The patient consented to the employment of thiosinamine, having been duly informed of its experimental nature. At the beginning I used a half grain internally t. i. d. with instructions to gradually increase the dosage. For a period of four years he took, not continually but at more or less frequent intervals, from a half to three grains daily. Gastric irritation, a garlic odor to the breath, and a loss of weight were noted before any decided toxic symptoms manifested themselves. These latter began as a bilateral nasal hemorrhage followed the next morning by hemorrhagic patches on the gums at the junctions with the teeth, on the tongue, the buccal membrane and the mucous membrane of the hard and soft palates, varying in size from 1 mm. to 1 cm. in diameter, also a large number of areas in the skin of the face, arms, legs and body, from 1 mm. to 4 cm. in diameter. The patches were elevated in the mucous membrane but not in the skin. The urine was loaded with blood, but no casts nor renal epithelium were found. The epistaxis was confined to Kiesselbach's spot on each side of the septum. No hemorrhage occurred in the drumheads or conjunctivae. There were no ocular or cerebral symptoms. A large amount of blood was lost and considerable weakness noted. The patient's home was forty miles from Philadelphia, and at the onset of the toxic symptoms he was placed in bed and treated by his local physician. On the third day, the nasal hemorrhage continuing and becoming alarming, he left his bed against medical advice and came to see me at my office. It was necessary to use the electric cautery to check the hemorrhage. He returned home, went to bed, for a few days, and in less than three weeks showed no sign of purpura or hematuria. The loss of weight was soon recovered. As far as the effect on the ears was concerned his tinnitus was not so noticeable, the deafness was increased in the left ear, but improved in the right.

Gun-shot Wound in Ear. K. KIRCHNER, *Monatschr. f. Ohrenh.*, Heft 1, 1913, p. 7.

The accident was followed by an illness of two months, and pronounced, intense vertigo when the head was raised. Nine months after the injury the projectile was removed; after nine weeks the drum membrane had cicatrized and the hearing was improved. But even at the present writing (three years after the injury) the patient has attacks of vertigo, nausea and headache.

Ed.

BOOK REVIEWS.

Handbuch der speziellen Chirurgie des Ohres und der oberen Luftwege.

Edited by DRS. L. KATZ, H. PREYSING, AND F. BLUMENFELD. Bd. 1, Haelfte 2, Lieferung 4-5, price M. 8.50; Lieferung 6, price M. 4.50; Bd. 2, Lieferung 4-5, price M. 6.50. Curt Kabitzsch, Wuerzburg, 1912.

Since our last review of this classical series of monographs comprising the "Handbuch der speziellen Chirurgie des Ohres und der oberen Luftwege," edited by Katz, Preysing and Blumenfeld, probably the most important and valuable series of special monographs as yet published in oto-laryngology, a large number of additional contributions have been made to this "Handbuch." For a review of the previous publications of this classic work, we refer our readers to page 750, June, 1911; page 1208, December, 1911 and page 78, January, 1913.

Our present review of the second half of volume 1 begins with monograph E by Prof. A. Kuttner of Berlin: "Roentgen diagnosis in diseases of the accessory sinuses, hypophysis, teeth and ears." The author records minutely the historical and chronological development of roentgen technic as applied to our specialties, beginning with the work of Scheeler and Glover in 1896 and 1897 and extending to the improved technic of today. Apparatus and technic are carefully described and illustrated and the latest phase of the question, namely stereoscopic radiograms after Bruenings and others are indicated. The reproduction of radiograms is uniformly good and especial attention is directed to the presentation of that phase of the question referring to the pathology of the hypophysis. Radiography of the mastoid could well have been given more minute consideration.

In the next section Prof. Edmund Meyer considers phlegmonous inflammations of the upper air tract.

Erysipelas in its relation to the nose and extension into the pharynx, peri-tonsillar and retro-pharyngeal abscesses, and phlegmonous inflammations of the larynx and of the neck are carefully considered in their etiology, surgery and therapeutics.

Septic disease of the naso-pharynx and of the ears, mucosa of the pharynx, tonsils and larynx, and intra-cranial complications of otogenic sepsis are carefully treated in the concluding monograph of the second half of volume I.

No phase of septic invasion in oto-laryngology seems to have been overlooked and the recent pathology of the Klebs-Loeffler bacillus as a general germ-carrier and of streptococcal invasion of the tonsils in its relation to the general system, its complication of acute nephritis and endocarditis, the Plaut-Vincent bacillus, serum therapy, lumbar puncture, —all is subject-matter indicative of the thoroughness and minuteness of this exhaustive treatise.

Owing to the irregularity with which these monographs are published in their regular series it is difficult to have their review follow in numerical sequence.

The first and only monograph of volume 2 as yet issued is that by Prof. Voss on "Injuries and surgical diseases of the external ear." Classified under (A.) auricle the author devotes separate chapters respectively to (1) malformations and their correction; (2) injuries, in which burns and frost-bites are presented in interesting form, and ot-hematoma, with excellent pathological data and microscopic sections; (3) inflammations wherein experimental research with the injection of fresh pyozyaneus and pneumococcus into the auricle of rabbits and their results are given; (4) erysipelas; (5) noma; (6) tuberculosis; and (7) tumors. B. External auditory canal is classified under (1) malformations; (2) injuries; (3) acquired atresia and stenosis; (4) inflammations; (5) abnormal conditions of the cerumen; (6) foreign bodies; and (7) neoplasms.

Operationen am Ohr. Die Operationen bei Mittelohreiterungen und ihren intrakraniellen Komplikationen. (Operations on the ear.) By Dr. B. HEINE, Munich. Third, revised edition. Pp. 232 with 29 illustrations in the text and 7 plates. Price, Mk. 8.80. Verlag S. Karger, Berlin, 1913.

This third edition of an excellent working-manual on operations on the ear includes the following new chapters: Consideration and value of roentgenology in mastoiditis. The Passow-plastic for closing post-auricular fistulae. (The author evidently overlooks other plastic methods which have been devised and successfully employed.) The so-called conservative, radical operation, examination of the blood in sinus thrombosis, functional test of the labyrinth. The chapter on the surgery of the labyrinth is entirely rewritten. The author emphasizes the importance of prompt and free incision of the membrana tympani, of early operations on the mastoid following acute middle-ear suppuration; he opposes closure of the wound after the acute mastoid operation without tamponage and does not favor the too schematic indications for ligation of the jugular. He has discarded compression-thrombosis as a specific form in the classification of sinus thrombosis.

Zur Klinik der Eiterungen des Ohrlabyrinths. (Suppuration of the Labyrinth.) By Prof. Dr. W. UFFENORDE, Goettingen. Pp. 103, with 9 plates. Price, Mk. 5. Verlag Curt Kabitzsch, Wuerzburg, 1913.

The author presents in this monograph his personal, practical and experimental experiences in the field of labyrinthine suppuration, its diagnosis and therapy.

There is much of individuality and personal equation in this presentation, and also a critical discussion of the views and technic of other authorities who have individualized their work in this field.

Labyrinth Papers. By Dr. GEORGE W. MACKENZIE, Philadelphia. Pp. 222. Price, \$2.00. Examiner Printing House, Lancaster, Pa., 1913.

The papers contained in this volume of 222 pages were presented to various societies and published in various journals between June, 1908, and February, 1911.

They are: diagnosis and treatment of labyrinthine suppuration; report of two cases of labyrinthine suppuration; differential diagnosis in labyrinthine suppuration; differentiation of labyrinth suppuration from cerebellar abscess; differentiation of labyrinth suppuration from affections of the eighth nerve; prognosis and treatment of labyrinth suppuration; physiology and pathology of the non-acoustic or so-called static labyrinth; and labyrinth fistula.

A graceful foreword is written by Dr. Gustav Alexander of Vienna to whom the collection is dedicated by the author.

There are a number of typographical errors and some of the subject-matter presented has already been supplanted by more recent theories. It is an interesting series of papers, however, and well worthy of perusal.

Contribution a l'etude de l'Otologie francaise au cours de ces cinquante dernieres annees. (French otology during the last fifty years.) By Dr. C. CHAUMEAU, Paris. Volume 1. Pp. 455. J.-B. Bailliere et Fils, Paris, 1913.

This is the first volume of a series undertaken by the author to present the development of otology in France during the past fifty years. The well-known work of Dr. Chauveau as an oto-laryngological historian and critic requires no further reference. It is indeed a labor of love and the work of a lifetime.

The data contained in this work is classified according to subject and not by authors and their publications. The first part includes anatomy, physiology, methods of examination, general pathology, symptomatology and treatment. The second part comprises diseases of the external, mid-

dle and internal ear, and additional chapters on deaf-mutism and diseases of the ear in medico-legal aspects. An introductory chapter has been written by Hofrat Politzer.

We may judge of the extensive character of this work on laryngology in France by citing that the bibliography contains 92 pages and over 3,000 individual references. The present volume contains only the anatomy and physiology of the ear.

This is a companion series to the author's classic contribution on "History of diseases of the pharynx," and we trust that he may bring the present series to an equally successful issue.

Causes and Prevention of Deafness. Four lectures delivered under the auspices of the National Bureau for Promoting the General Welfare of the Deaf. By DR. J. KERR LOVE, Aural Surgeon, Glasgow Royal Infirmary, etc. London, 1913. Price, post-free, ½.

This pamphlet of 127 pages consists of a series of four lectures delivered under the auspices of the national bureau for promoting the general welfare of the deaf in England. These lectures were given during the winter of 1913-1914 and are issued in this pamphlet form to make them accessible to all who are in sympathy with this great movement for the prevention of deafness. So eminent an authority on this question as Dr Love should be assiduously read, and his council carefully considered.

Preventive medicine is as vital a factor in the fight for the amelioration or elimination of conditions that produce hereditary deafness as in the case of syphilis or tuberculosis.

These lectures comprise: 1. The nature and consequences of deafness. 2. Classification of deafness and the prevention of acquired deafness. 3. Sporadic congenital deafness and deafness from syphilis. 4. True hereditary deafness.

We urge every reader of *THE LARYNGOSCOPE* to secure a copy of the pamphlet. It can be obtained from the National Bureau for Promoting the General Welfare of the Deaf, 104 High Holborn, London, W. C.

Die Ermuedung der Stimme (Phonasthenia). By DR. R. IMHOFFER. Prague. Pp. 132. Price, Mk. 5. Curt Kabitzsch, Wuerzburg, 1913.

Phonasthenia or "voice-fag," is a functional disturbance of the voice-producing mechanism that has received but scant attention in practical laryngology. Probably only laryngologists who treat numerous professional singers are brought into frequent contact with this condition.

The author presents an exhaustive monograph of five chapters in which he considers: 1. The historical development of phonasthenia, giving Flatau of Berlin credit for its scientific introduction in 1906 and tracing its development and citing various publications in their new bearing on this question. 2. The clinical picture of phonasthenia is defined and described in detail. 3. Statistics and etiology form an interesting chapter in which the author presents, (a) voice-strain; (b) faulty register in singing; (c) errors in breathing; (d) faulty position of the larynx; (e) errors in tone-placing; (f) "coup de glotte;" (g) incorrect position of jaw, lips and buccal muscles; and (h) open throat. 4. This chapter considers the diagnosis and prognosis. 5. The concluding chapter treats of the therapy of phonasthenia. The monograph is of more than passing interest especially to the laryngologist who has a large clientele of professional singers.

Bacterial Diseases of Respiration, and Vaccines in their Treatment. By DR. R. W. ALLEN, London. Pp. 236, illustrated. Price, \$3.00 P. Blakiston's Son and Co., Philadelphia, 1913.

Most of the matter contained in this book has already appeared as a series of articles in the *Journal of Vaccine Therapy*, of which the author has until recently been the editor. So much of our recently developed data in the etiology of diseases of the respiratory tract is based upon bacterial findings that this publication must be considered as distinctly time-

ly and important, especially, as it emanates from the pen of an author of long and practical experience.

The author crystallizes the necessity and value of such bacteriological work and its publication in this concrete statement: "Despite the great impetus given to exact bacteriological research by the developments of vaccine therapeutics, especially within the past few years, the omission has not yet been repaired in any single book or collection of books to which I have had access. The true importance of any disease is to be estimated neither by its rarity nor by its mortality-rate, but rather by its frequency and its disabling power. Granting the truth of this statement, it follows that diseases of the respiratory tract are of supreme importance to the human race; in frequency they excel all others, in the production of impaired health of varying periods and to varying extents they are fruitful to an extreme degree. It has occurred to me that a brief but sympathetic description of the bacterial diseases of the respiratory tract would have a certain value and prove of interest to many."

An idea of the subject-matter comprising this work may be obtained from an enumeration of the titles of its eleven chapters: 1. Bacteriology of the respiratory tract in health. 2. Respiratory tract in disease; methods of investigation; technic. 3. Cultural methods for investigating the bacteriology of the respiratory tract. 4. Results of observations into the bacteriology of the various diseases of the respiratory tract. 5. Vaccine therapy of respiratory disorders. 6. Vaccines in the treatment of nasal and post-nasal catarrh, tracheitis and laryngitis, and infections of the accessory spaces. 7. Vaccines in the treatment of bronchitis and asthma. 8. Vaccines in pneumonia, technic and results. 9. Vaccine in whooping-cough, diphtheria, hay-fever, ozena, rhinoscleroma. 10. Mixed infections of pulmonary tuberculosis and vaccines in their treatment. Import of mixed infections. 11. Infections by the tubercle bacillus and the use of specific products in their treatment. The tubercle bacillus and its toxins. Tuberculins and their use.

There are many interesting conclusions as the result of the author's experience. The etiology of all common colds is claimed to be on a bacterial basis. Vaccine therapy is enthusiastically endorsed in the treatment of all affections of the respiratory tract definitely traced to bacterial origin. Immunizing by vaccines is emphasized.

It is not only a practical working-manual for bacteriological research but the expression of personal investigation by an experienced pathologist who has devoted the past ten years to a careful study of this field.

Lehrbuch der Sprachheilkunde (Logopedie) fuer Aerzte, Pedagen und Studierende. By DR. EMIL FROESCHELS, Vienna. Pp. 397, with 100 illustrations in the text and five plates. Franz Deuticke, Leipzig, 1913, price, M.13.

The fields of defects of speech considered both from their central and a peripheral origin are being brought into more and more intimate practical relations with the work of otologists and laryngologists.

The present monograph is the product of an otologist of long-standing and excellent training who has devoted much time and study to the question of the deaf child and its development. He presents defects of speech from every view-point, considering first the anatomy and physiology of the organ of hearing and of the nose, accessory cavities and other organs concerned in the production of speech.

Then follow chapters on the physiology of proper breathing with practical notes on graphic annotations, on the use of the pneumograph, spirometer, breath-volumeter, etc.

Chapter IV presents the physiology of the voice; chapter V, the physiology of articulation; VI, registrations of speech; VII, voice-modifications and accents; VIII, evolution of speech in the child. This last chapter is elaborated with much care and describes central localization,

comprehension of vowels and words, and the relation of sight to the comprehension of speech. In chapter IX much valuable information is presented on the practical general examination of individuals with speech defects. Chapter X is an important contribution on deaf-mutism and speech-defects in the hard-of-hearing. It is in this field that the author has developed his most efficient work.

Mutism due to mechanism or pathology of the tongue, hare-lip, cleft-palate, adenoid vegetations or motor disturbances constitute chapter XI. Mutism in the feeble-minded, aphasia, stammering and stuttering are presented respectively in carefully considered chapters.

Hygiene of the voice in speech and song, systematic speech-defects, and speech defects in nervous diseases conclude this excellent work.

This monograph is of much value to teachers and advisors of patients with defects of speech in any of their varying phases and justifies the careful study of every oto-laryngologist interested in this field.

Stammering and Cognate Defects of Speech. By C. S. BLUEMEL, Boulder, Colo. Volume 1: The psychology of stammering, pp. 365, volume 2: Contemporaneous systems of treating stammering, their possibilities and limitations, pp. 391. Price, \$5.00. G. E. Stechert and Co., New York, 1913.

Speech defects in their various types are being more definitely and more practically considered as a department in the ever-increasing field of work in oto-laryngology and to-day there are quite a number of men in our special field who are concentrating their energies and talents almost entirely in this direction.

Stammering and cognate defects of speech are here presented in two exhaustive volumes. Volume 1 treats of the psychology of stammering and volume 2 discusses contemporaneous systems of treating stammering, their possibilities and limitations. The psychology of stammering as viewed by the author is analyzed from the various theories of causality that are fundamentally at the basis of such defects. This volume discusses such theories, seriatim and in detail.

In volume 2 the writer presents a review of the various systems employed in Europe and in America in the treatment of stammering, laying especial emphasis upon the methods contemporaneously employed. This volume includes a valuable commentary upon many of the systems of treating stammering at present in vogue. He also considers respiration, vocalization, articulation, verbal exercises, mechanical appliances, psychological methods, stammering schools, and concludes this practical treatise with a very comprehensive glossary on stammering, stuttering and other speech-defects.

Atlas der Entwicklung der Nase und des Gaumens beim Menschen mit Einschluss der Entwicklungsstörungen. (Embryological Development of the Nose and Gums in Man.) By DR. KARL PETERS, Greifswald. Pp. 130, 189 illustrations. Price, Mk. 20. Verlag Gustav Fischer, Jena, 1913.

Embryological development of the nose and gums in man including the embryological abnormalities is the interesting contribution of Dr. Karl Peters of Greifswald. It is especially acceptable at this scientific psychological period where so much research and new work is being done in the anatomy, comparative anatomy, topographical anatomy and pathology of the nose and its accessory spaces. The latest decade has seen a remarkable activity in the development of this field of our science and this excellent original contribution on embryological development of the nose and accessory tissues is a fitting complement to these other fields of research.

The author presents his contribution as an atlas of the embryology of the nose. In point of fact the atlas is preceded by a well-written dissertation of 130 pages on the embryology of the nose in which a chronological description the development, a consideration of the malforma-

tions and embryological defects, important data of measurements in the period of development of the fetus in relation to the nasal development, and a complete bibliography are presented. The 189 figures are for the greater part original drawings made under the direct supervision of the author.

To the close student this volume presents many interesting phases of nasal embryology and presents the most important factor of any publication,—originality.

Vocal Atlas Designed for Teachers and Students of Singing and Speaking. By DR. FRANK E. MILLER, published by Holmes W. Merton, New York. Pp. 16, with illustrations in the text and colored plates. G. Schirmer, New York.

Laryngologists especially interested in the treatment of professional singers and speakers should have a copy of this vocal atlas.

This atlas portrays the different positions of the vocal organs in tone-production and in progressive series. The illustrations are made from life and from dissections under the supervision of Prof. G. S. Huntington of the College of Physicians and Surgeons of New York.

The anatomy and physiology of the relation of the voice-producing organs when presented in accurate color-plates as those contained in this handy atlas should be of especial value and assistance to every professional singer and speaker who seeks an intelligent comprehension not only of the actual production of song and speech but also of its definite mechanism.

Manual of Otology. By GORHAM BACON, M. D., New York. Sixth edition, revised and enlarged. Pp. 536 with 164 illustrations and 12 plates. Price, \$2.25. Lea and Febiger, Philadelphia, 1913.

The sixth edition of this manual presents the following revisions: The articles on suppurative labyrinthitis, submucous operations on the nasal septum, otosclerosis, enucleation of the faucial tonsil, vaccine therapy, examination of the cerebro-spinal fluid,—all have been rewritten or recast. New illustrations have been added and a number of important case-histories inserted. These revisions have brought the present edition of this popular manual up to date.

Die Untersuchung der Luftwege. (Examination of the air passages.)

By DR. P. H. GERBER, Königsberg. Pp. 45 with 49 illustrations in the text and 12 illustrations on four plates. Price Mk. 2. Curt Kabitzsch, Wuerzburg, 1913.

This is an address presenting the modern methods of examining the upper air passages. The purpose of the address, as the author states in the preface, is to introduce to a large circle of the profession the present progress in the methods developed in the examination of the upper respiratory tract of patients, and as he further expresses it, "the dawn of rhino-laryngo-tracheo-bronchiology."

This is an interesting, up-to-date, well-illustrated monograph in which all the latest technic and apparatus employed in the examination of the respiratory organ are set forth. It presents a chronological picture in word and photograph of the evolution of rhinoscopy and laryngoscopy.

Relation of the Lacrimal Organs to the Nose and Nasal Accessory Sinuses. By PROF. DR. A. ONODI, Budapest. Pp. 24, with photographic reproductions, in natural size, of 45 preparations. Price, \$4.25 net. William Wood and Co., New York, 1913.

The latest publication of this eminent authority on the nasal accessory sinuses to claim our attention is the present volume on the "Relation of the lacrimal organs to the nose and accessory sinuses."

This is a monograph of twenty-four pages and forty-five splendid illustrated plates with explanatory text. The topographical anatomy, pathology, therapy and surgery of the lacrimal organs in relation to the nasal

cavities is minutely described. An unusual and ingenious feature of this publication is its publication simultaneously in German, French and English. The English translation has been done by Dr. Dan Mackenzie of London, and the French by Dr. Bellin of Paris. The monograph is presented first in the original German, followed by a literal French translation, and concluded by the English version.

The descriptive subject-matter accompanying the text is printed in each of the three languages on the same page. This volume, therefore, has the advantage of being readily accessible to every reader in oto-laryngology and becomes, thus, a universal, scientific publication.

The value of such a contribution both for its original text and for its clever presentation cannot be over-estimated.

Lang's German-English Dictionary of Terms used in Medicine and the Allied Sciences. Second edition. Pp. 563, edited and revised by MILTON K. MEYERS, M. D., Philadelphia. Price, \$5.00 net. P. Blakiston's Son & Co., 1913.

A good English dictionary of terms used in medicine is a great necessity to every close student of oto-laryngology, as much of the important literature of our field is published in German and must be read *in extenso* to be thoroughly appreciated.

This volume is not an unabridged production of its kind, but contains an up-to-date arrangement and a comprehensive list of words and terms found in German medical literature.

The Tonsils and the Voice By DR. RICHARD B. FAULKNER. Pp. 381. Price, \$2.00. The Presbyterian Book Store, Pittsburgh, 1913.

We beg to acknowledge the receipt of a review copy of this book.

Laryngectomy for Cancrr. G. W. CRILE. *Ann. of Surg.*, Aug. 1913.

Two conditions arise in regard to the curability of cancer of the larynx,—is it intrinsic or extrinsic. The intrinsic variety lends itself readily to cure by operation. Crile has performed twenty-seven laryngectomies for cancer with two operative fatalities, one death from mediastinal abscess, the other from necrosis of the trachea with consequent septic pneumonia. The speech-defect, disfigurement and predisposition to pulmonary disease following the operation may be disregarded. In many cases he has been able to dispense with tracheotomy both at the time of the operation and subsequently. The anaesthetic of choice is nitrous oxide. He does a preliminary tracheotomy so that at the time of the laryngectomy the trachea is fixed in position; he uses at the operation novocain as local anesthetic to the skin and tissues over the trachea, and also to mucous membrane of larynx.

PACKARD.

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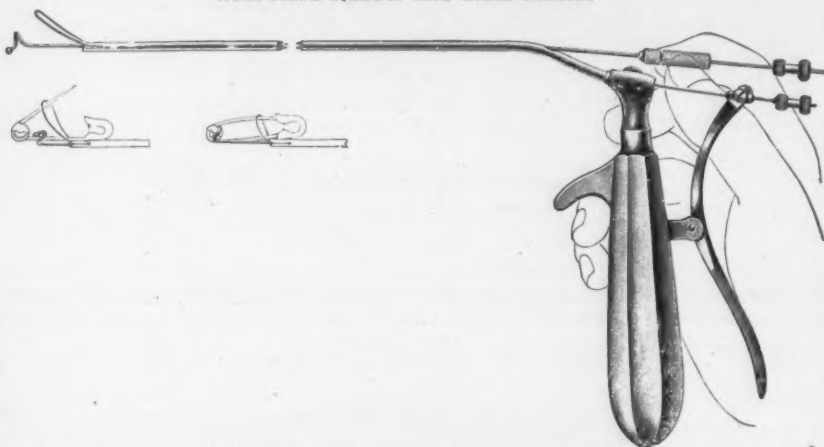
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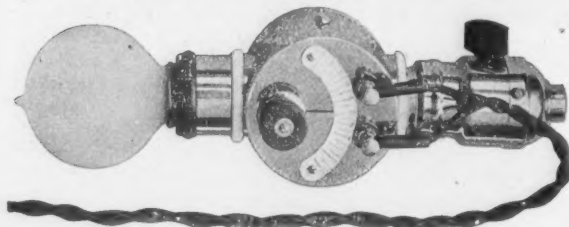
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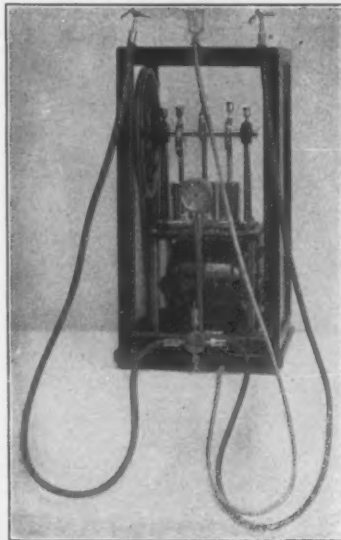
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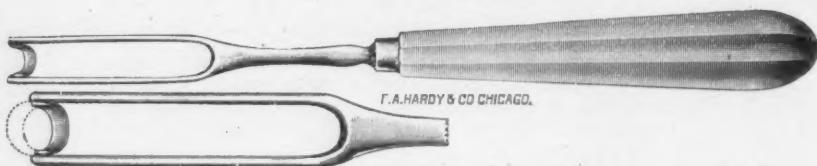
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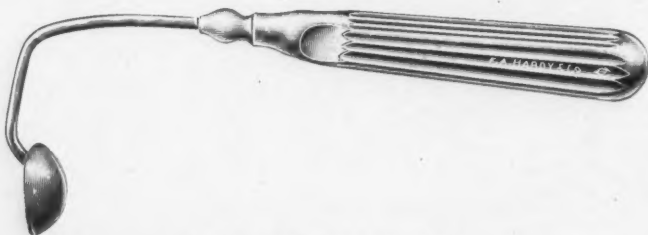
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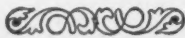
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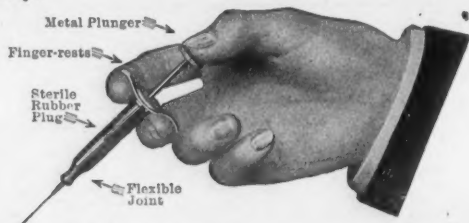


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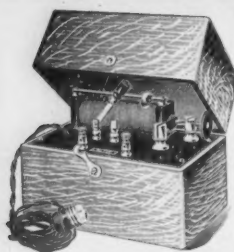
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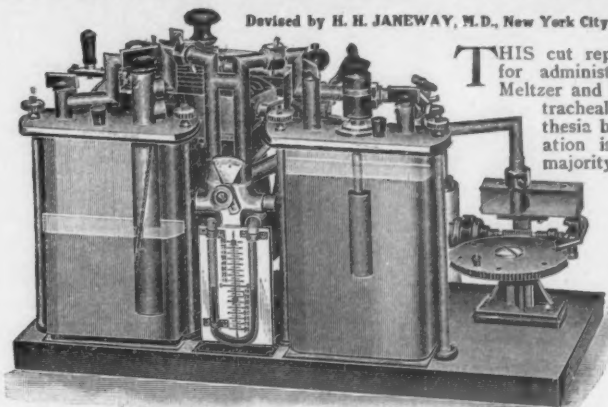
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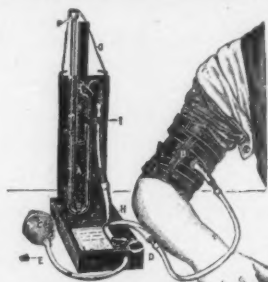
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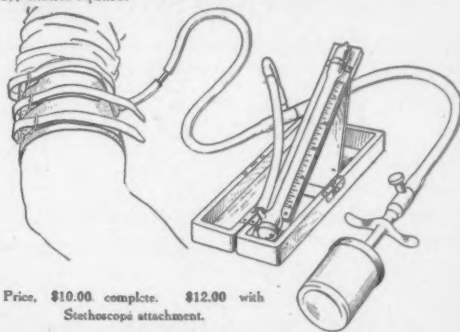
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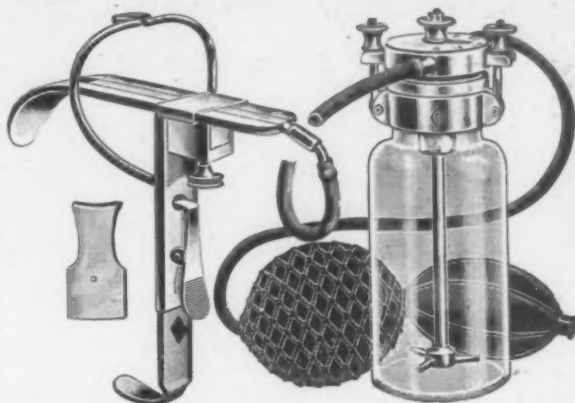
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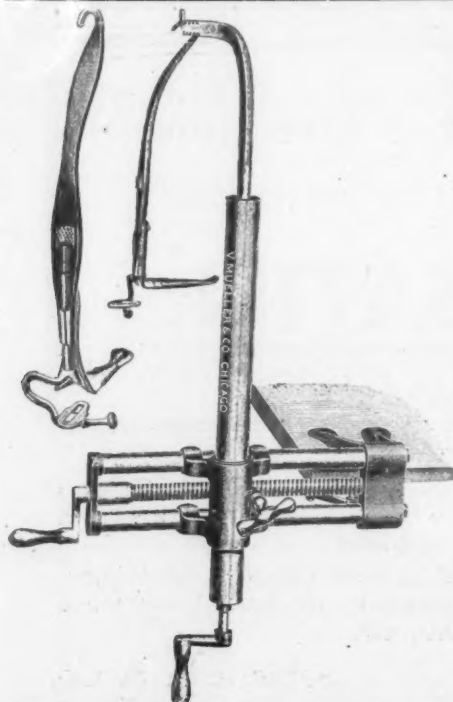
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